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ABSTRACT

Compiled are abstracts and indexes to selected print and non-print materials related to wastewater treatment and water quality education and instruction, as well as materials related to pesticides, hazardous wastes, and public participation. Sources of abstracted/indexed materials include all levels of government, private concerns, and educational institutions. Title, author(s), publication date, cross-references, descriptors, and availability are provided for each entry. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements of their programs. This publication supplements and does not replace "Water Quality Instructional Resources Information System (IRIS): A Compilation of Abstracts to Water Quality and Water Resources Materials" or IRIS Supplements I-VIII. (Author/JN)

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Water

Water Quality Instructional Resources Information System

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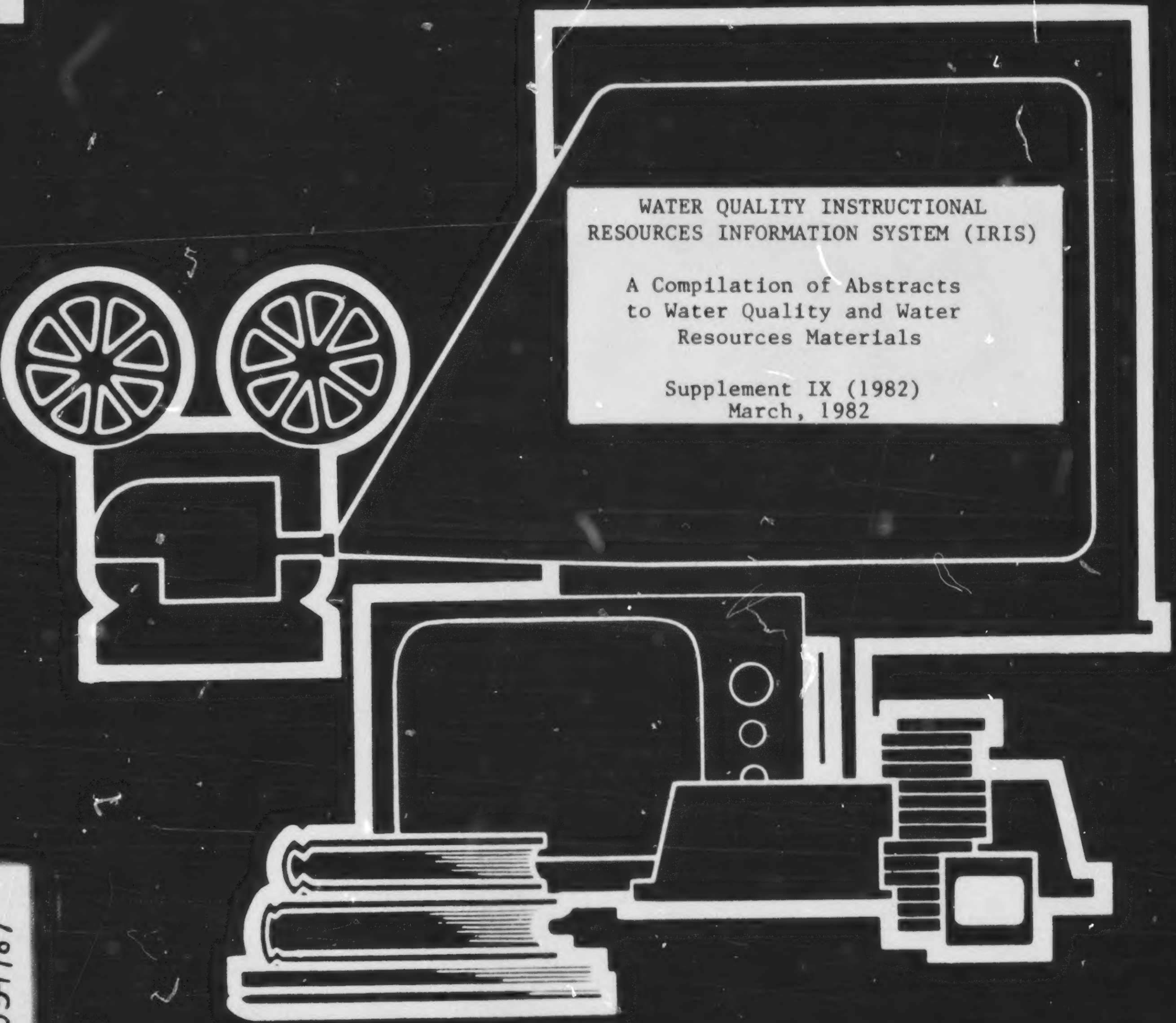

WATER QUALITY INSTRUCTIONAL
RESOURCES INFORMATION SYSTEM (IRIS)

A Compilation of Abstracts
to Water Quality and Water
Resources Materials

Supplement IX (1982)
March, 1982

SE 039 187

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Preface

This publication contains abstracts and indexes to selected materials related to wastewater treatment and water quality education and instruction. In addition, some materials related to pesticides, hazardous wastes, and public participation are included. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements in their programs.

Supplements to this publication will be issued periodically.

For further information about these materials contact:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

Telephone: (614) 422-6717

I. General Information about Materials in IRIS.

A. What types of materials are included in IRIS?

The EPA Instructional Resources Center (water) acquires, reviews, indexes, and announces both print (books, modules, units, etc.) and non-print (films, slides, video tapes, etc.) materials related to water quality and water resources education and instruction.

Materials selected must be available from some source for announcement. When materials are not readily available we attempt to make the materials available through some national information service for easier acquisition. In a few cases the EPA Instructional Resources Center is the source of the materials.

B. How are materials entered into IRIS?

We request that people assist us in locating materials for the system. If you have materials you believe to be useful to others, please send two copies if possible to the:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

Materials are reviewed by the project staff. Availability of the materials is checked, and the materials are abstracted and indexed. The abstract describes the contents of the material. The index terms (descriptors) are concepts or terms used to describe the contents and the form of the document. (See the Subject Index for a listing of those that have been used.) The index terms are useful for locating materials manually, such as with this compilation, and also by computer.

When items are processed they are entered on the IRIS (water) computer tape. This tape is maintained by the EPA Instructional Resources Center at The Ohio State University and is used for producing tapes for other information systems, publications, and for computer searches conducted at The Ohio State University.

C. How can a user locate materials in IRIS?

1. All materials placed in IRIS (water) Collection.

Materials entered into the IRIS (water) collection can be located in two ways: (1) by manual search of this compilation and similar ones to follow and (2) by computer.

The first compilation contained resumes of selected materials processed for the previous IRIS (water) collection and resumes of selected materials of items added to the IRIS (water) collection. A limited number of copies of the compilation in paper copy and microfiche are available free of charge as long as the supply lasts from the EPA Instructional Resources Center. After the free copies of the compilations are gone, copies will be available for purchase from the EPA Instructional Resources Center.

Quarterly updates of the compilation are available by subscription on a yearly basis beginning November, 1979. Information regarding an annual subscription to IRIS (water) Quarterly Compilations can be obtained by writing to the EPA Instructional Resources Center. A subscription to the quarterly supplements for 1981-82 is $12.00 (within the U.S.). Price to Canada is $14.00. Prices in other Countries is $20.00. Separate quarterly supplements are $4.00 each.

The compilation and the quarterly supplements can be scanned and the subject index can be used for manual searches.

Computer tapes of the IRIS (water) collection can also be searched by both batch and on-line computer searches. The IRIS tapes are available for searching through the Bibliographic Retrieval Services, Inc., (BRS) and with Dialog. Any search service that currently subscribes to BRS or Dialog is able to search the IRIS data base by on-line techniques. Individuals or agencies with computer terminals and telephone connection equipment can subscribe to BRS or Dialog and do their own searches if they desire.

Information regarding BRS may be obtained by writing or phoning BRS, Corporation Park, Building 702, Scotia, NY 12302, (518) 374-5011.

Information regarding Dialog may be obtained by writing or phoning Dialog Information Retrieval Service, 3460 Hillview Avenue, Palo Alto, CA 94304, (415) 858-3775.

Plans are being made to mount IRIS tapes with other on-line vendors. Information regarding this service will be announced in a future EPA IRC Bulletin and in mailings from the EPA Instructional Resources Center.

2. Materials placed in the Educational Resources Information System (ERIC)

A number of the materials processed for the IRIS (water) system are entered into the ERIC system and announced in Resources in Education (RIE). Resources in Education (RIE) is published monthly and is available from:

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
(202) 783-3238

The current price is listed in the most recent issue of RIE. Check if a college or university library close to you has a copy. If they do not, contact the EPA Instructional Resources Center for assistance.

Many libraries subscribe to RIE. Materials announced in RIE can be searched manually each month by scanning RIE or by checking the index terms in the back of each issue. Materials announced in RIE can be searched by computer also. ERIC computer tapes may be purchased outright, but most users of the tapes gain access to them through three major database vendors, Dialog, Systems Development Corporation (Orbit), and Bibliographic Retrieval Services. For the addresses of search services in your state that can search these databases, contact the:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

Most of the materials announced in RIE are available on microfiche (microfilm) at over 700 sites throughout the United States and the world. Users can view these materials on site at many locations to identify what they believe will be useful to them at no cost. Microfiche copies (or in most cases Xerox copies) can be ordered through the ERIC Document Reproduction Service. The address and order information is in the back of each issue of RIE. Xerox copies of many items related to water quality and resource education and training can also be ordered through the EPA Instructional Resources Center for 3¢ per page plus $1.00 per document.

For information about locations of ERIC microfiche sites in your state, contact the EPA Instructional Resources Center.

A number of journal articles processed for the IRIS (water) system are entered into the ERIC system and announced in Current Index to Journals in Education (CIJE).

Current Index to Journals in Education is published monthly and is available from:

ORYX Press
3930 East Camelback Road
Phoenix, Arizona 85018
(602) 254-6156

Many libraries subscribe to CIJE. Materials announced in CIJE can be searched manually each month by scanning CIJE or by checking the index terms in the back of each issue. Materials announced in CIJE can be searched by computer also. Refer to the previous discussion of RIE concerning computer searches.

Materials announced in CIJE can be located in journals at many university libraries.

Many of the articles can be obtained from University Microfilms. Current prices are $6.00 for articles published before January 1976 and $4.00 for articles published after January 1976. For further information write to:

UMI Article Reprint Department
300 North Zeeb Road
Ann Arbor, Michigan 48106
(313) 761-4700

II. How to Use the Compilation

A. Description of Information in Resumes

Each resume is listed by EW number in numerical order in the resume section. Two samples of resumes are provided to explain the data fields in the resumes. Sample resume #1 is a sample resume of an item not entered into ERIC. Sample resume #2 is a sample resume of an item entered into ERIC; a few additional data elements are in these resumes and are explained.

1. Sample resume of materials not entered in ERIC

   a. IRIS NUMBER: EW 006 023
   b. PUBLICATION DATE: FEB 81
   c. TITLE: PROGRAMMED APPROACH TO WATER/MASS ANALYSES.
   d. PERSONAL AUTHOR: SPENCE, GEORGE R., JR.
   e. DESCRIPTOR: *DESIGN; *ENGINEERING; *EQUIPMENT; *MASS BALANCE; *PROJECT DESIGN; *POLLUTION ENGINEERING; *PIPES; *WATER RESOURCES

   f. DESCRIPTIVE NOTE: 30-33P.
   g. ABSTRACT: DURING THE ENGINEERING PHASE OF A PROJECT DESIGN WATER REQUIREMENTS OFTEN CHANGE AS NEW INFORMATION BECOMES AVAILABLE. THIS ARTICLE DETAILS A PROGRAMMED APPROACH TO CALCULATION OF A WATER/MASS BALANCE WHICH PROVIDES THE USER WITH THE ABILITY TO READILY ASSESS THE IMPACT OF VARYING WATER QUALITIES, FLOW PATTERNS, AND FLOW RATES. THIS INFORMATION IS THEN USED IN DETERMINING PIPE AND EQUIPMENT SIZES.

   h. AVAILABILITY: POLLUTION ENGINEERING, V13 N2

   a. IRIS NUMBER -- this is the identification number sequentially assigned to materials as they are processed. Gaps in numbers mean that some items have been deleted, are being processed to add new information, or have been delayed in processing for some reason.

   b. PUBLICATION DATE -- date material was published according to information on the material.

   c. TITLE

   d. PERSONAL AUTHOR -- person or persons who wrote, compiled, or edited the material. Up to two personal authors can be listed.

   e. DESCRIPTOR -- subject terms which characterize substantive contents and form of the materials. The major terms are preceeded by an asterisk. Terms used to index all resumes in this compilation can be reviewed in the Subject Index.

   f. DESCRIPTIVE NOTE -- various items of information may be contained in this section. For print materials the number of pages is usually listed.

g. ABSTRACT -- some early materials entered into IRIS did not have abstract information. All materials currently being entered into IRIS have an informative abstract that describes the contents of the item.

h. AVAILABILITY -- information in this field indicates where the material can be obtained and the price of the material quoted the last time information was received from the source. Please note: Prices of nearly all materials are subject to changes and may not be accurate at the time a person orders a specific item.

2. Sample resume of material entered into ERIC (Resources in Education)

Item entered into ERIC (Resources in Education) will have a few additional data fields.

IRIS ACCESSION NUMBER: EW006664

PUBLICATION DATE: 80

TITLE: RESOURCE DEVELOPMENT OF WATERSHED LANDS: A SIX WEEK SHORT COURSE.

DESCRIPTOR: ADMINISTRATION; ECOLOGICAL FACTORS; ECONOMIC FACTORS; INSTRUCTIONAL MATERIALS; *LAND USE; NATURAL RESOURCES; *POST SECONDARY EDUCATION; *TECHNICAL EDUCATION; *WATER RESOURCES; HYDROLOGY; NATURAL RESOURCES MANAGEMENT; WATER QUALITY; *WATERSHEDS

b. DESCRIPTIVE NOTE: EDRS PRICE: MF01 PLUS POSTAGE-NOT AVAILABLE IN HARD COPY DUE TO MARGINAL LEGIBILITY OF ORIGINAL DOCUMENT

ABSTRACT: THIS COURSE WAS DESIGNED TO PROVIDE THE WATER RESOURCE TECHNICIAN OR MANAGER WITH INFORMATION WHICH WILL AID IN THE IMPLEMENTATION OF IMPROVEMENTS OF PRESENT LAND USE PRACTICES AND TO ILLUSTRATE ALTERNATIVE CONCEPTS AND TECHNIQUES IN LAND AND WATER USE FOR INCREASING AND IMPROVING THE MULTIPLE PRODUCTS
a. OF WATERSHED LANDS. (ED 197 941)

AVAILABILITY: ERIC, DOCUMENT REPRODUCTION SERVICE,
P. O. BOX 190, ARLINGTON, VA 22210

a. ERIC NUMBER -- the ED number indicates the document has been processed and entered into RESOURCES IN EDUCATION. This identification number is the number to use when ordering a document or when requesting information about a document.

b. EDRS PRICE -- if material is available through the ERIC Document Reproduction Service, the price of the material when it was entered into the ERIC system and the form of the material is indicated. "MF" means microfiche; "HC" means Xerox copy. Prices are subject to change. Current prices of microfiche and paper copies are listed in the back of each issue of RESOURCES IN EDUCATION; consult the latest monthly issue for current prices. Information about ordering items can also be obtained by contacting:

ERIC Document Reproduction Service (EDRS)
P. O. Box 190
Arlington, Virginia 22210

Telephone: (703) 841-1212

Items that are available on microfiche (MF) are contained in microfiche collections at over 700 sites where they can be read. For information on the microfiche locations in your state contact the EPA Instructional Resources Center.

B. How to Locate Desired Materials

Users can identify materials of interest by scanning the resume listings, or using the Subject Index, Author Index, or Institutional Index.

1. Subject Index

The Subject Index is designed to enable the user to search for information on either a broad subject or a narrow information concern. An EW number is included for each item listed under the subject heading. The EW number refers to the abstract entry in the resume section where complete bibliographic information, an abstract of the item, and availability information can be found.

A user can also coordinate a search by checking EW numbers that appear under two or more subject headings. For example, you could check all the EW numbers under Water Treatment and all the EW numbers under Films. EW numbers included under both subject headings would include information relevant to Water Treatment that were films. EW numbers under wastewater treatment and laboratory techniques would provide a list of materials related to Laboratory Techniques and to Wastewater Treatment. Similar techniques could be used to identify other information desired.

Users with ERIC microfiche should check the resume entry. If the document is available on microfiche from the ERIC Document Reproduction Service, the availability will be indicated by "MF" on the resume by "EDRS Price." This means libraries with ERIC microfiche collections should have the document on microfiche.

If you want a document available through the ERIC Document Reproduction Service (EDRS) see the section on ordering documents.

2. Author Index

If you desire to locate a document by the name of the author, you can use the Author Index. EW numbers are provided under the author in the Author Index as in the Subject Index. Some documents do not have a listed author; hence, they are not listed in this index.

III. Correcting an Existing IRIS Record

The IRIS data base will be updated on a quarterly basis. Corrections will be made to the data base at those times. You can help improve IRIS by sending corrections for items you find to be in error.

We request that you duplicate (copy) the resume from the compilation, mark the information you believe to be wrong (or incomplete), and send the marked resume to:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

Corrections of errors will occur in the IRIS tapes at the next update after comments are received.

If you have difficulty obtaining materials from the listed source in the AVAILABILITY section of the resume, please let us know. We will contact the sources to verify whether the materials are available, but your assistance will provide corrections between annual availability checks.

If you are the supplier of materials in IRIS, please let us know if you remove a product from your list, modify a product on your list, or change the price of the product.

IV. Requests to Receive Information about IRIS and the IRC Bulletin

Information regarding IRIS, materials in IRIS, and modifications in the sytem will be announced in the IRC Bulletin. The Bulletin is issued about six times a year as information is available.

If you are not on the mailing list write to the EPA Instructional Resources Center. Limited numbers of some back issues are still available.

If you need information about IRIS you can also phone (614) 422-6717 with your questions.

V. Requests for Assistance in Using IRIS

A. Assistance in use of IRIS manuals

If you need help in using the IRIS manuals phone (614) 422-6717 or write to the EPA Instructional Resources Center. Staff are normally available from about 8:30 a.m. to 4:30 p.m. Eastern time to answer your questions.

B. Assistance in accessing IRIS by computer

1. Conducting searches.

   See Section VIII.

2. Subscribing to BRS, Inc. for computer searching of IRIS.

   Contact: Bibliographic Retrieval Services, Inc.
   Corporation Park, Building 702
   Scotia, New York 12302
   (518) 374-5011

3. Subscribing to Dialog for computer searching of IRIS.

   Contact: Dialog Information Retrieval Service
   3460 Hillview Avenue
   Palo Alto, California 94304
   (415) 858-3775

4. Contacting a computer search service (an agency that will conduct a search for you, usually for a fee).

   The EPA Instructional Resources Center maintains a list of agencies that can conduct searches. Most charge a fee, though some are free to qualified users in a limited geographical area.

   Phone or write to obtain information for your area.

VI. How to Locate Other Relevant Educational Materials

A number of people have requested information related to such areas as management, basic skills (reading, mathematics, writing) human relations, contract negotiations, and other topics. The EPA Instructional Resources Center plans to develop some user service products in selected areas in 1982.

Another excellent source of information for many educational concerns is the ERIC System.

ERIC is a national information system designed and developed by the U.S. Office of Education, and now supported and operated by the National Institute of Education (NIE), for providing ready access to descriptions of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs.

There are 16 Clearinghouses in the nationwide ERIC network. Each specializes in a different, multi-discipline, educational area. Each searches out pertinent documents.

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.

The 16 ERIC Clearinghouses are listed on the next few pages, together with addresses, telephone numbers, and brief scope notes describing the areas they cover. You can contact them for assistance in locating information relevant to their scope notes.

A. ERIC Clearinghouse on Adult, Career, and Vocational Education
The Ohio State University
National Center for Research in Vocational Education
1960 Kenny Road
Columbus, Ohio 43210
Telephone: (614) 486-3655

Career education, formal and informal at all levels, encompassing attitudes, self-knowledge, decision-making skills, general and occupational knowledge, and specific vocational and occupational skills; adult and continuing education, formal and informal, relating to occupational, family, leisure, citizen, organizational, and retirement roles; vocational and technical education, including new sub-professional fields, industrial arts, and vocational rehabilitation for the handicapped.

B. ERIC Clearinghouse on Counseling and Personnel Services
University of Michigan
2108 School of Education
Ann Arbor, Michigan 48109
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings. theoretical development of counseling and guidance, use and results of personnel procedures such as testing, interviewing, disseminating, and analyzing such information, group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

C. ERIC Clearinghouse on Elementary and Early Childhood Education
University of Illinois
College of Education
805 West Pennsylvania Avenue
Urbana, Illinois 61801
Telephone: (217) 333-1386

Prenatal factors, parental behavior; the physical, psychological, social, educational, and cultural development of children from birth through the primary grades; educational theory, research, and practice related to the development of young children.

D. ERIC Clearinghouse on Educational Management
University of Oregon
Library, Room 108
Eugene, Oregon 97403
Telephone: (503) 686-5043

Leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators, tasks and processes of administration, methods and varieties of organization, organizational change, and social context of the organization.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

E. ERIC Clearinghouse on Handicapped and Gifted Children
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091
Telephone: (703) 620-3660

Aurally handicapped, visually handicapped, mentally handicapped, physically handicapped, emotionally disturbed, speech handicapped, learning disabilities, and the gifted; behavioral, psychomotor, and communication disorders, administration of special education services; preparation and continuing education of professional and paraprofessional personnel; preschool learning and development of the exceptional; general studies on creativity.

F. ERIC Clearinghouse on Higher Education
George Washington University
One Dupont Circle, Suite 630
Washington, DC 20036
Telephone: (202) 296-2597

Various subjects relating to college and university students, college and university conditions and problems, college and university programs; curricular and instructional problems and programs, faculty, institutional research; federal programs, professional education (medical, law, etc.), graduate education, university extension programs, teaching-learning, planning, governance, finance, evaluation, interinstitutional arrangements, and management of higher educational institutions.

G. ERIC Clearinghouse on Information Resources
Syracuse University
School of Education
130 Huntington Hall
Syracuse, New York 13210
Telephone: (315) 423-3640

Management, operation, and use of libraries; the technology to improve their operation and the education, training, and professional activities of librarians and information specialists. Educational techniques involved in microteaching, systems analysis, and programmed instruction employing audiovisual teaching aids and technology, such as television, radio, computers, and cable television, communication satellites, microforms, and public television.

H. ERIC Clearinghouse for Junior Colleges
University of California
96 Powell Library Building
405 Hilgard Avenue
Los Angeles, California 90024
Telephone: (213) 825-3931

Development, administration, and evaluation of public and private community junior colleges. Junior college students, staff, curricula, programs, libraries, and community services.

I. ERIC Clearinghouse on Languages and Linguistics
Center for Applied Linguistics
3520 Prospect Street, N.W.
Washington, DC 20007
Telephone: (202) 298-9292

Languages and linguistics. Instructional methodology, psychology of language learning, cultural and intercultural content, application of linguistics, curricular problems and developments, teacher training and qualifications, language sciences, psycholinguistics, theoretical and applied linguistics, language pedagogy, bilingualism, and commonly taught languages including English and speakers of other languages.

J. ERIC Clearinghouse on Reading and Communication Skills
National Council of Teachers of English
1111 Kenyon Road
Urbana, Illinois 61801
Telephone: (217) 328-3870

Reading, English, and communication skills, preschool through college. Educational research and development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication--forensics, mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, instruction development, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching. Instructional materials, curricula, tests and measurement, preparation of reading teachers and specialists, and methodology at all levels. Role of libraries and other agencies in fostering and guiding reading. Diagnostic and remedial services in school and clinical settings.

K. ERIC Clearinghouse on Rural Education and Small Schools
New Mexico State University
Box 3AP
Las Cruces, New Mexico 88003
Telephone: (505) 646-2623

Education of Indian Americans, Mexican Americans, Spanish Americans, and migratory farm workers and their children; outdoor education; economic, cultural, social, or other factors related to educational programs in rural areas and small schools; disadvantaged of rural and small school populations.

L. ERIC Clearinghouse for Science, Mathematics, and Environmental Education
The Ohio State University
1200 Chambers Road - Room 310
Columbus, Ohio 43212
Telephone: (614) 422-6717

All levels of science, mathematics, and environmental education; development of curriculum and instructional materials; media applications; impact of interest, intelligence, values, and concept development upon learning; preservice and inservice teacher education and supervision.

M. ERIC Clearinghouse for Social Studies/Social Science Education
Social Science Education Consortium, Inc.
855 Broadway
Boulder, Colorado 80302
Telephone: (303) 492-8434

All levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of learning theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

N. ERIC Clearinghouse on Teacher Education
American Association of Colleges for Teacher Education
One Dupont Circle, Suite 610
Washington, DC 20036
Telephone: (202) 293-2450

School personnel at all levels; all issues from selection through preservice and inservice preparation and training to retirement, curricula, educational theory and philosophy; general education not specifically covered by Educational Management Clearinghouse; Title XI NDEA Institutes not covered by subject speciality in other ERIC Clearinghouses; all aspects of physical education.

O. ERIC Clearinghouse on Tests, Measurement, and Evaluation
Educational Testing Service
Rosedale Road
Princeton, New Jersey 08541
Telephone: (609) 734-5180

Tests and other measurement devices; evaluation procedures and techniques; application of tests, measurement, or evaluation in educational projects of programs.

P. ERIC Clearinghouse on Urban Education
Columbia University
Teachers College
Box 40
525 West 120th Street
New York, New York 10027
Telephone: (212) 678-3437

The relationship between urban life and schooling; the effect of urban experiences and environments from birth onward; the academic, intellectual, and social performance of urban children and youth from grade three through college entrance (including the effect of self concept, motivation, and other affective influences); education of urban, Puerto Rican and Asian American populations, and rural and urban black populations; programs and practices which provide learning experiences designed to meet the special needs of diverse populations served by urban schools and which build upon their unique as well as their common characteristics, structural changes in the classroom, school, school system, and community and innovative instructional practices which directly affect urban children and youth; programs, practices, and materials related to economic and ethnic discrimination, segregation, desegregation, and integration in education; issues, programs, practices, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

Q. Educational Resources Information Center
Central ERIC
National Institute of Education
1200-19th Street, N.W.
Washington, DC 20208
Telephone: (202) 254-5555

There are other sources of educational information in many states. Included are information dissemination units in the state departments of education, intermediate education units, and local education units. In many cases, a local school administrator or school librarian can help you locate assistance.

VII. How to Structure a Computer Search of IRIS

This explanation relates to the IRIS data base that can be searched on-line through Bibliographic Retrieval Services, Inc. or Dialog. As IRIS becomes available through other sources, information relevant to those services will be provided.

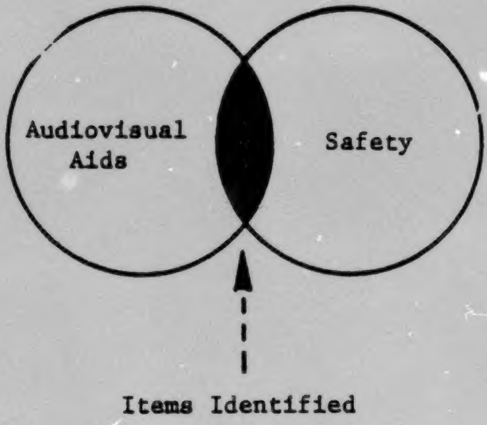
A few notes about the service are important. The following fields are searchable by computer: (1) IRIS Accession Number (EW number), (2) ERIC Accession Number (ED number), (3) Authors, (4) Institution, (5) Title, (6) Subject index terms, and (7) Abstract.

If you submit a search of IRIS through BRS or Dialog, the program will search for the words you select in three fields unless the searcher requests to limit the search. These fields are: (1) the title field, (2) the subject index field, and (3) the abstract. We recommend you use this feature especially for searches on specific terms. If you find more material than you want by this technique you can narrow the search to items that may have the most information on the topic by limiting the search to the subject index field.

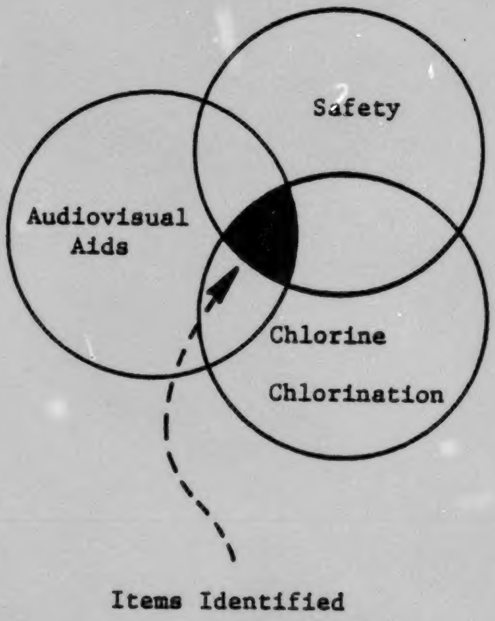
Several sample searches are listed on the following pages.

A. Sample 1

If you want to locate audiovisual aids that relate to safety you would submit a search with audiovisual aids and safety. Materials that included the terms both audiovisual aids and safety in the title field, the abstract, and the subject index field would be identified by the computer.

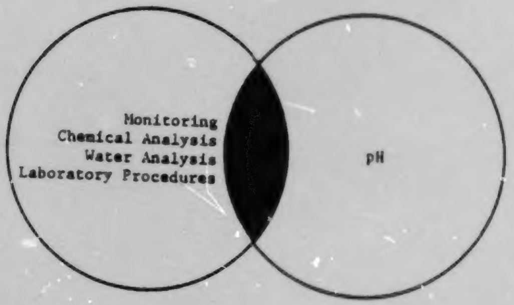

Audiovisual Aids
Safety
Items Identified

The computer program can tell you the number of items, the title of the items, or print the entire resume of each item. If you were primarily interested in audiovisual aids, safety, and chlorine you would submit a search of these three terms. You might want to include chlorides and chlorination as well as chlorine in the search. This search would identify materials that contained audiovisual aids, safety, and one or more of the words, chlorine and chlorination.


Safety
Audiovisual Aids
Chlorine
Chlorination
Items Identified

B. Sample 2

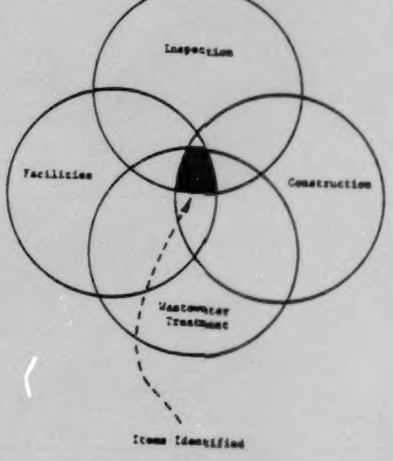
If you want to identify materials related to monitoring, you should include several related terms and the chemical, material, or situation that is being monitored. See the example below.


Monitoring
Chemical Analysis
Water Analysis
Laboratory Procedures
pH

This search would identify all the items that included any of the terms on the left and pH.

C. Sample 3

If you are interested in materials related to inspection and construction you could conduct a search of these two terms. The search would identify all materials that included both terms. If you were interested in only wastewater treatment facilities you could construct a search as diagrammed.


Inspection
Facilities
Construction
Wastewater Treatment
Items Identified

This search would yield specific materials and demonstrates how a computer search can help you locate materials you want.

The subject index can also be used to help you select words to include in a search. Words listed in the subject index are certain to be in the searchable fields. Therefore, selecting these terms to use in structuring a search will increase the probability of locating materials. Some words will appear in the title or abstract that are not included in the subject term field. Such words can be used to check if any materials are in the data base. If, however, you conduct a search with such a word it is usually best to include a synonym that is in the subject index.

VIII. How to Order Materials

The AVAILABILITY field in the resume indicates where materials can be obtained. A few of the sources are explained.

A. A number of audiovisual materials can be obtained on loan or purchased from the EPA Instructional Resources Center. Most items previously available from the NTOTC office will be available after November 1, 1981 from the EPA Instructional Resources Center at The Ohio State University. For further information write or call.

B. Some of the materials are available through the ERIC Document Reproduction Service. MF (microfiche) are 4" x 6" sheets of microfilm; up to 96 pages of text can be reproduced on one sheet. HC (paper copy) is a reproduction of the document in paper form at the original size.

Order forms for these materials can be obtained from:

ERIC Document Reproduction Service
P.O. Box 190
Arlington, Virginia 22210
(703) 841-1212

C. The EPA Instructional Resources Center will provide xerox copies of materials that are not copyrighted for $1.00 per document plus $0.03 per page.

If you can not obtain materials that are listed or have difficulty obtaining materials, please contact the EPA Instructional Resources Center. We can provide assistance in obtaining materials from some sources. If materials become unavailable, we will remove them from the IRIS data base.

RESUME SECTION

IRIS ACCESSION NUMBER: EW001785

PUBLICATION DATE: JUN 74

TITLE: CONTROL OF OIL AND OTHER HAZARDOUS MATERIALS - TRAINING MANUAL.

DESCRIPTOR: *CONTINGENCY PLANS; FEDERAL LEGISLATION; *HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; *OIL; *OIL SPILLS; PETROLEUM INDUSTRY; *POST SECONDARY EDUCATION; REGULATIONS; *TRAINING; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 177P. PRICE: $1.00 PLUS $.03 PER PAGE.

ABSTRACT: PRESENTED IS THE TRAINING MANUAL FOR A COURSE OFFERED EMPLOYEES OF REGULATORY AGENCIES WHO ARE ASSIGNED DIRECT RESPONSIBILITY FOR RESPONSE TO NONRECURRING DISCHARGES OF OIL. THE COURSE IS DESIGNED TO FAMILIARIZE STUDENTS WITH ALTERNATIVES IN SPILL CONTROL AND PROVIDE OPPORTUNITY TO PRACTICE RESPONSE UNDER REALISTIC CONSTRAINTS AND MEASURES OF SUCCESS. TOPICS INCLUDE HAZARDOUS MATERIALS; OIL SPILL PROBLEMS; OIL CHARACTERISTICS; OIL SPILL PREVENTION, CONTROL AND TREATMENT; AND LEGAL RESPONSE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW005077

PUBLICATION DATE: SEP 78

TITLE: ENVIRONMENTAL EDUCATION PROGRAMS FOR WATER SUPPLY AND WASTEWATER TREATMENT IN NEW ENGLAND.

DESCRIPTOR: CORRESPONDENCE COURSES; *ENVIRONMENT; *NEW ENGLAND; *PROFESSIONAL ORGANIZATIONS; *POST SECONDARY EDUCATION; STATE AGENCIES; *TRAINING PROGRAMS; UTILITIES; WATER POLLUTION CONTROL; *WATER SUPPLY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 69P.

ABSTRACT: THIS BOOKLET CONTAINS COURSES AND PROGRAMS OFFERED BY ALL TYPES OF POST-SECONDARY SCHOOLS, PROFESSIONAL ORGANIZATIONS AND STATE AGENCIES IN NEW ENGLAND, AS WELL AS CORRESPONDENCE COURSE SPONSORED BY COLLEGES OUTSIDE OF THE REGION. THE INFORMATION PROVIDED INCLUDES A BRIEF DESCRIPTION OF THE PROGRAM, THE COURSES OFFERED IN WASTEWATER TREATMENT AND/OR WATER SUPPLY, TUITION, NUMBER OF GRADUATES, AND THE CONTACT PERSON FOR EACH PROGRAM. IN ADDITION, THERE ARE THREE APPENDICES WHICH PROVIDE INFORMATION ON TEXTBOOKS GENERALLY USED IN WATER SUPPLY AND WASTEWATER TREATMENT COURSES, INDIVIDUALS WITHIN STATE AGENCIES AND PROFESSIONAL ORGANIZATIONS WHO CAN BE CONTACTED FOR FURTHER INFORMATION, AND A LISTING BY CATEGORY OF BOTH WATER SUPPLY AND WASTEWATER TREATMENT COURSES.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, JOHN F. KENNEDY FEDERAL BUILDING, GOVERNMENT CENTER, BOSTON, MA 02203

IRIS ACCESSION NUMBER: EW006185

PUBLICATION DATE: AUG 80

TITLE: PLANNING WASTEWATER MANAGEMENT FACILITIES FOR SMALL COMMUNITIES.

PERSONAL AUTHOR: DEESE, PATRICIA L.; HUDSON, JAMES F.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGIES; *FACILITIES; *MANAGEMENT; *PLANNING; *PUBLIC PARTICIPATION; *PROGRAM PLANNING; *SEWAGE; *SMALL COMMUNITIES; WASTEWATER COLLECTION; *WASTEWATER TREATMENT; WASTE DISPOSAL

DESCRIPTIVE NOTE: 158P.

ABSTRACT: THIS MANUAL PRESENTS A SET OF PROCEDURES FOR PLANNING WASTEWATER MANAGEMENT FACILITIES FOR SMALL COMMUNITIES, AND IS DIRECTED AT AREAS WITH POPULATIONS OF UNDER 10,000. IT IS DESIGNED TO AID ENGINEERS AND THE COMMUNITIES THEY SERVE IN EVALUATING VARIOUS OPTIONS FOR TREATMENT AND DISPOSAL OF WASTEWATER. PART 1 OF THE MANUAL WAS PREPARED TO GIVE AN OVERVIEW OF THE PLANNING PROCESS AND THE REGULATORY CONTEXT UNDER WHICH IT FITS, AND IS LIKELY TO BE USEFUL FOR LOCAL OFFICIALS, CONCERNED CITIZENS, AND ENGINEERS ACTIVE IN WASTEWATER PLANNING. PART 2 IS A TECHNICAL REFERENCE, SHOWING DETAILS OF THE PLANNING PROCESS WITH EXAMPLES FROM CASE STUDIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006282

PUBLICATION DATE: SPR 81

TITLE: PREDICTING POLLUTION EFFECTS IN THE MARINE ENVIRONMENT.

PERSONAL AUTHOR: CAPUZZO, JUDITH M.

DESCRIPTOR: AQUATIC ENVIRONMENTS; *AQUATIC ORGANISMS; *ASSESSMENT; BEHAVIORAL RESPONSES; BIOASSAYS; BIOCHEMISTRY; *BIOLOGY; CELLS; *ENVIRONMENTAL IMPACTS; *MARINE ENVIRONMENT; ORGANISMS; *POLLUTANTS; POPULATION DYNAMICS; TESTING; *WATER POLLUTION

DESCRIPTIVE NOTE: 25-33P.

ABSTRACT: THIS ARTICLE DISCUSSES METHODS USED TO PREDICT OVERALL IMPACT OF POLLUTANT DISCHARGES IN THE MARINE ENVIRONMENT. IN ADDITION TO BIOASSAYS, ATTENTION IS FOCUSED ON APPROACHES THAT INVESTIGATE IMPACTS AT THE FIVE FOLLOWING ORGANIZATIONAL LEVELS: BIOCHEMICAL-CELLULAR, ORGANISMAL, SIMULATED COMMUNITY, POPULATION DYNAMICS, AND COMMUNITY DYNAMICS AND STRUCTURE.

AVAILABILITY: OCEANUS, V24 N1

IRIS ACCESSION NUMBER: EW006283

PUBLICATION DATE: SPR 81

TITLE: ECOLOGICAL EFFECTS OF OCEAN SEWAGE OUTFALLS: OBSERVATIONS AND LESSONS.

PERSONAL AUTHOR: MEARNS, ALAN J.

DESCRIPTOR: *AQUATIC ORGANISMS; *CALIFORNIA; *COASTAL ZONES; *ECOLOGICAL FACTORS; *ENVIRONMENTAL IMPACTS; *MARINE ENVIRONMENT; *OCEANS; *RESEARCH REPORTS; *SEWAGE; *SEWAGE OUTFALLS; SLUDGE; *WASTE DISPOSAL; WATER QUALITY

DESCRIPTIVE NOTE: 45-54P.

ABSTRACT: THIS ARTICLE DISCUSSES COASTAL WATER RESEARCH PROJECTS THAT HAVE PRODUCED DATA QUANTIFYING THE AMOUNTS OF SEWAGE MATERIAL DISCHARGED INTO OCEANS, THEIR DISPERSAL AND DISTRIBUTION ALONG THE COAST, THE RANGE AND MAGNITUDE OF BIOLOGICAL EFFECTS, THE RATES AT WHICH EFFECTS INCREASE, STABILIZE AND DECREASE, AND THE DEGREE OF CONTAMINANT ACCUMULATION BY MARINE LIFE. EMPHASIS IS ON THE SEWAGE OUTFALLS ALONG THE SOUTHERN CALIFORNIA COAST.

AVAILABILITY: OCEANUS, V24 N1

IRIS ACCESSION NUMBER: EW006284

PUBLICATION DATE: SPR 81

TITLE: THE OCEANS AND U.S. SEWAGE SLUDGE DISPOSAL STRATEGY.

PERSONAL AUTHOR: VACCARO, RALPH; AND OTHERS

DESCRIPTOR: *LEGAL ASPECTS; LEGISLATION; *MANAGEMENT; *MARINE ENVIRONMENT; *OCEANS; *POLICY; RESEARCH NEEDS; *SEWAGE SLUDGE; *SLUDGE DISPOSAL; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 55-59P.

ABSTRACT: THIS ARTICLE DISCUSSES THE CURRENT DUMPING OF BARGED SEWAGE SLUDGE AT DISPOSAL SITES IN THE NEARSHORE WATERS OFF THE NORTHEASTERN U.S. COAST, THE IMPACTS OF THIS PRACTICE, AND POSSIBLE FUTURE CONCERNS. ALSO DISCUSSED IS THE PROPOSED LEGISLATION HALTING OCEANIC SEWAGE SLUDGE DISPOSAL AND THE POSSIBLE IMPLICATIONS FOR WASTEWATER MANAGEMENT.

AVAILABILITY: OCEANUS, V24 N1

IRIS ACCESSION NUMBER: EW006300

PUBLICATION DATE: 81

TITLE: PRUDENT PRACTICES FOR HANDLING HAZARDOUS CHEMICALS IN LABORATORIES.

DESCRIPTOR: *CHEMICALS; CHEMICAL SAFETY; DISPOSAL; EPIDEMIOLOGY; *GUIDES; HANDLING; *HAZARDOUS MATERIALS; *LABORATORY SAFETY; *SAFETY; TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 290P.

ABSTRACT: THIS GUIDE IS DESIGNED AS A REFERENCE TOOL FOR LABORATORY SCIENCE STUDENTS AND THEIR TEACHERS, INSTITUTIONAL SAFETY OFFICERS, RESEARCH SCIENTISTS -- ANYONE CONCERNED WITH SAFE PRACTICES IN WORKING WITH HAZARDOUS CHEMICALS IN LABORATORIES. IT RECOMMENDS PROCEDURES FOR THE SAFE HANDLING AND DISPOSAL OF HAZARDOUS SUBSTANCES, ALONG WITH BROAD RECOMMENDATIONS FOR THE DEVELOPMENT OF COMPREHENSIVE LABORATORY SAFETY PROGRAMS.

AVAILABILITY: NATIONAL ACADEMY OF SCIENCES, 2101 CONSTITUTION AVENUE, NW, WASHINGTON, DC 20418

IRIS ACCESSION NUMBER: EW006679

PUBLICATION DATE: JUL 81

TITLE: "CONTRACTOR" INSPECTIONS BY EPA.

PERSONAL AUTHOR: DELAND, MICHAEL R.

DESCRIPTOR: *ENVIRONMENT; *FEDERAL LEGISLATION; *FACILITIES; *GUIDELINES; *INSPECTION; *INDUSTRY; *MONITORING; *POLLUTION; *REGULATIONS

DESCRIPTIVE NOTE: 739P.

ABSTRACT: STRESSED IS THE CLARIFICATION OF LEGISLATION THAT REQUIRES ONSITE COMPLIANCE CHECKS. PREVENTION OF THE DISCLOSURE OF COMPANY TRADE SECRETS BY AUTHORIZED INSPECTORS IS QUESTIONED.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N7

IRIS ACCESSION NUMBER: EW006682

PUBLICATION DATE: JUL 81

TITLE: DETERMINATION OF THE BIODEGRADABILITY OF ORGANIC COMPOUNDS.

PERSONAL AUTHOR: LIU, DICKSON; AND OTHERS

DESCRIPTOR: ANALYTICAL TECHNIQUES; ACTIVATED SLUDGE; *ENVIRONMENT; *ORGANIC COMPOUNDS; *RESEARCH; *TOXICITY; *WATER SUPPLY; *WATER QUALITY; *WASTEWATER

DESCRIPTIVE NOTE: 788-793P.

ABSTRACT: THE EFFECTS OF BIODEGRADATION OF ORGANIC COMPOUNDS WHICH ENTER THE AQUATIC ENVIRONMENT BY USE OR DISPOSAL IS ADDRESSED. DESCRIBED IS THE DEVELOPMENT OF A STANDARD PROCEDURE AND APPARATUS FOR DETERMINING THE RELATIVE PERSISTENCE OF ORGANIC COMPOUNDS UNDER CONTROLLED LABORATORY CONDITIONS.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N7

IRIS ACCESSION NUMBER: EW006683

PUBLICATION DATE: JUL 81

TITLE: DOUBLE ACTIVATION ANALYSIS. THE SIMULTANEOUS USE OF RADIOTRACERS AND ACTIVABLE TRACERS IN A STREAM MICROCOSM.

PERSONAL AUTHOR: KNAUS, RONALD M.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ENVIRONMENTAL RESEARCH; *INSTRUMENTATION; *RESEARCH; *RADIOISOTOPES; *TRACERS

DESCRIPTIVE NOTE: 809-812P.

ABSTRACT: DOUBLE ACTIVATION ANALYSIS AS CONCERNED WITH THE SHORT-TERM AND THE LONG-TERM DYNAMICS OF A TRACER ELEMENT IN AN ECOSYSTEM IS DISCUSSED. DESCRIBED IS THE USE OF A COMBINATION OF A SHORT-TERM RADIOISOTOPE WITH STABLE ISOTOPES OF THE SAME ELEMENT TO PERFORM ECOLOGICAL STUDIES.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N7

IRIS ACCESSION NUMBER: EW006684

PUBLICATION DATE: JUL 81

TITLE: ESTIMATING EQUILIBRIUM ADSORPTION OF ORGANIC COMPOUNDS ON ACTIVATED CARBON FROM AQUEOUS SOLUTION.

PERSONAL AUTHOR: ARBUCKLE, WILLIAM BRIAN

DESCRIPTOR: *ACTIVATED CARBON; ADSORPTION; *COST EFFECTIVENESS; *HAZARDOUS MATERIALS; *INDUSTRIAL WASTES; MATHEMATICAL MODELS; *ORGANIC COMPOUNDS; *THERMODYNAMICS

DESCRIPTIVE NOTE: 812-819P.

ABSTRACT: PROPOSED ARE METHODS USING RELATIVE ADSORPTION OF SPECIFIC COMPOUNDS ON ACTIVATED CARBON. THE APPLICABILITY OF THE METHODS FOR USE BY ENGINEERS IS EVALUATED.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N7

IRIS ACCESSION NUMBER: EW006685

PUBLICATION DATE: JUL 81

TITLE: AMMONIA TOXICITY TO FISHES. EFFECT OF PH ON THE TOXICITY OF THE UN-IONIZED AMMONIA SPECIES.

PERSONAL AUTHOR: THURSTON, ROBERT V.; RUSSO, ROSEMARIE C.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; AQUATIC ENVIRONMENT; *AMMONIA; ALKALINITY; *FISH; *LIMNOLOGY; *RESEARCH; *TOXICITY; TEMPERATURE; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 837-840P.

ABSTRACT: A REVISION OF WATER QUALITY CRITERIA TO BE BASED EITHER ON UN-IONIZED AMMONIA IN COMBINATION WITH PH OR ON TOTAL AMMONIA IN ADDITION TO UN-IONIZED AMMONIA IS RECOMMENDED.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N7

IRIS ACCESSION NUMBER: EW006814

PUBLICATION DATE: AUG 81

TITLE: ODOR SCRUBBER ENDS "STINKY POINT" LABEL.

PERSONAL AUTHOR: LITTLE, HARRY L.; MALTER, EDWARD G.

DESCRIPTOR: *ACTIVATED SLUDGE; CHLORINATION; *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *ODOR SCRUBBERS; *ODORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 41-42P.

ABSTRACT: DESCRIBED IS THE USE OF A CHLORINE AIR SCRUBBER SYSTEM AND HOUSEKEEPING PROCEDURE TO PREVENT ODOR GENERATION AT A WASTEWATER TREATMENT FACILITY. THE PROBLEMS AND OPERATIONS OF AN AUTOMATED GRIT AND SCREENINGS DEBRIS HANDLING SYSTEM ARE ADDRESSED.

AVAILABILITY: AMERICAN CITY & COUNTY, V96 N8

IRIS ACCESSION NUMBER: EW006851

PUBLICATION DATE: 80

TITLE: DIRECTORY OF SILVER SERVICES.

DESCRIPTOR: *DIRECTORIES; EQUIPMENT; *INFORMATION SOURCES; *MANUFACTURERS; *PHOTOGRAPHY; *RESOURCE RECOVERY; *SILVER; *SILVER RECOVERY

DESCRIPTIVE NOTE: 22P.

ABSTRACT: THIS DIRECTORY CONTAINS THE NAMES AND LOCATIONS OF, AS WELL AS SERVICES AVAILABLE FROM, SILVER-RECOVERY FIRMS THROUGHOUT THE UNITED STATES AND CANADA. A LIST OF MANUFACTURERS OF SILVER-RECOVERY EQUIPMENT IS ALSO INCLUDED.

AVAILABILITY: CONSUMER/PROFESSIONAL & FINISHING MARKETS DIVISION, EASTMAN KODAK COMPANY, ROCHESTER, NY 14650

IRIS ACCESSION NUMBER: EW006852

PUBLICATION DATE: JAN 81

TITLE: TREATMENT OF PRIMARY EFFLUENT BY RAPID INFILTRATION.

PERSONAL AUTHOR: HARTMAN, R. B.; AND OTHERS

DESCRIPTOR: CASE STUDIES; *EFFLUENTS; FACILITIES; *INFILTRATION; MUNICIPALITIES; *OPERATIONS (WASTEWATER); RAPID INFILTRATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: PB81-129124

ABSTRACT: THIS STUDY ASSESSED THE CAPABILITY OF A RAPID INFILTRATION SYSTEM FOR UPGRADING PRIMARY EFFLUENT FROM A MUNICIPAL WASTEWATER TREATMENT PLANT, AND COMPARED THE PERFORMANCE WITH THAT OBTAINED EARLIER ON SECONDARY EFFLUENTS. THIS WAS DONE BY MONITORING THE INFLUENT AND EFFLUENT QUALITY VARIATIONS AT A RAPID INFILTRATION DEMONSTRATION FACILITY OVER A PERIOD OF ONE YEAR. RESULTS WERE FAVORABLE FOR GENERAL OPERATION, HYDRAULIC RESPONSE, ORGANIC REMOVALS, PHOSPHATE LEVELS, AND BACTERIA REMOVAL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006853

PUBLICATION DATE: MAY 81

TITLE: WASTEWATER REUSE - STATE OF THE ART.

PERSONAL AUTHOR: MIDDLEBROOKS, E. JOE

DESCRIPTOR: *CHEMICAL ANALYSIS; *DESIGN; *FACILITIES; *INSTRUCTIONAL MATERIALS; LEGAL PROBLEMS; *MANAGEMENT; MICROBIOLOGY; *MONITORING; ORGANIC COMPOUNDS; *POST SECONDARY EDUCATION; *RECYCLING; *STATE-OF-THE-ART REVIEWS; VIRUSES; WASTE DISPOSAL; *WASTEWATER TREATMENT; *WATER RESOURCES; *WATER REUSE

DESCRIPTIVE NOTE: 350P. PRICE: $40.00

ABSTRACT: FOLLOWING A STATE-OF-THE-ART REVIEW OF WATER AND WASTEWATER REUSE, MULTIDISCIPLINARY AUTHORITIES SURVEY MAJOR AREAS OF WATER AND WASTEWATER REUSE FROM THE POINTS OF ENGINEERING, DESIGN, PLANT PERFORMANCE, DETAILED DATA ON TRACE ORGANICS, VIRAL AND MICROBIOLOGICAL ANALYSES AND LEGAL AND INSTITUTIONAL CONSTRAINTS. ALSO CONSIDERED ARE THE FOLLOWING CONCERNS OF WASTEWATER REUSE FACILITIES: HEALTH AND SAFETY; SOCIAL; ADMINISTRATIVE; ENGINEERING; MONITORING; AND MARKETING.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW006854

PUBLICATION DATE: MAY 81

TITLE: DECOMPOSITION OF TOXIC AND NON-TOXIC ORGANIC COMPOUNDS IN SOILS.

PERSONAL AUTHOR: OVERCASH, MICHAEL R.; PAL, DHIRAJ

DESCRIPTOR: *ADSORPTION; *DECOMPOSITION; *ECOLOGY; *ENVIRONMENT; *HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; *LEACHING; MICROBIOLOGY; *ORGANIC COMPOUNDS; *PLANTS; *POST SECONDARY EDUCATION; *SOILS; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 375P. PRICE: $69.95

ABSTRACT: OFFERED IS NEW INFORMATION ON THE EFFECT OF VARIOUS TOXIC HAZARDOUS OR NON-TOXIC ORGANIC COMPOUNDS ON SOILS AND PLANTS. DECOMPOSITION, LEACHING, ADSORPTION, PLANT UPTAKE, MICROBIAL RESPONSE, CRITICAL TOXIC LEVELS, AND PATHWAYS FOR CHEMICAL ADDITIONS TO THE PLANT/SOIL SYSTEM ARE FULLY DISCUSSED FOR VARIOUS ORGANICS. CONTENTS INCLUDE: CHLORINATED ORGANICS, AGRICULTURAL CHEMICALS, PHENOL AND RELATED COMPOUNDS, AROMATIC AND POLYNUCLEAR AROMATICS, UREA RESINS, AND SURFACTANTS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW006876

PUBLICATION DATE: APR 81

TITLE: WASTEWATER DISCHARGES FROM WATER TREATMENT PLANTS, A STUDY.

DESCRIPTOR: COSTS; *EFFLUENTS; *ENVIRONMENTAL IMPACT; *OHIO RIVER; *POLLUTION; REGULATIONS; *RESEARCH REPORTS; *STANDARDS; *WASTEWATER TREATMENT; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 92P. PB81-210239

ABSTRACT: DATA ON WASTEWATER DISCHARGES FROM 15 WATER TREATMENT PLANTS IN THE OHIO RIVER BASIN WERE PROVIDED TO THE OHIO RIVER VALLEY WATER SANITATION COMMISSION (ORSANCO) FOR USE IN THE ONGOING REVISION OF ORSANCO EFFLUENT STANDARDS, SLATED FOR COMPLETION IN 1982. THE REPORT COMPILES ORSANCO AND FEDERAL REGULATIONS AND POLICIES ON THIS ISSUE, AS WELL AS THOSE OF THE EIGHT STATES FORMING THE ORSANCO COMPACT. DISPOSAL ALTERNATIVES FOR THESE DISCHARGES ARE PRESENTED AS WELL AS REPRESENTATIVE COSTS. POTENTIAL ENVIRONMENTAL IMPACTS OF THESE DISCHARGES TO LAND AND WATER ARE GIVEN ALONG WITH A CHARACTERIZATION OF EXISTING CONDITIONS ALONG THE OHIO RIVER MAINSTEM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006877

PUBLICATION DATE: FEB 81

TITLE: COMPARISON OF GROB CLOSED-LOOP-STRIPPING ANALYSIS (CLSA) TO OTHER TRACE ORGANIC METHODS.

PERSONAL AUTHOR: MELTON, R. G.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CONTAMINATION;

*DRINKING WATER; GRANULAR ACTIVATED CARBON; *GROB CLOSED-LOOP-STRIPPING ANALYSIS; *LABORATORY PROCEDURES; *ORGANIC COMPOUNDS; *RESEARCH REPORTS; TRACE ORGANICS; *WATER QUALITY; WATER TREATMENT

DESCRIPTIVE NOTE: 100P. PB81-211450

ABSTRACT: THIS PAPER PRESENTS A COMPARISON OF EXPERIMENTAL RESULTS FROM THE ANALYSIS OF DRINKING WATER BEFORE AND AFTER WATER TREATMENT USING 1 MILLION GALLON PER DAY (MGPD) GRANULAR ACTIVATED CARBON (GAC) CONTACTORS AT THE CINCINNATI WATER WORKS. THE FOLLOWING METHODS OF ORGANIC ANALYSIS WERE USED: (1) GROB CLOSED-LOOP STRIPPING ANALYSIS (CLSA) USING CAPILLARY GC/MS/DS, (2) BELLAR PURGE AND TRAP (P&T) USING PACKED COLUMN GC/HALL/DS, IE, EPA METHOD 601, (3) BATCH LIQUID - LIQUID EXTRACTION (BLLE) USING CAPILLARY GC/MS/DS, AND (4) XAD-2 ADSORPTION - ETHYL ETHER ELUTION (XAD-EEE) CAPILLARY GC/MS/DS. AT LEAST TWICE AS MANY 'CONSENT DECREE' ORGANICS (23) AND THE 'EPA OFFICE OF DRINKING WATER CHEMICAL INDICATORS OF INDUSTRIAL CONTAMINATION' (18) WERE MEASURED BY GROB CLSA THAN BY BELLAR P&T, BLLE, AND XAD-EEE ANALYSES. FURTHERMORE, GROB CLSA PRODUCED THIS SUPERIOR ANALYSIS AT A LOW COST-PER-COMPOUND-ANALYZED FIGURE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006878

PUBLICATION DATE: APR 81

TITLE: USE OF ASBESTOS-CEMENT PIPE.

PERSONAL AUTHOR: MILLETTE, JAMES R.

DESCRIPTOR: *ASBESTOS; *DRINKING WATER; EPIDEMIOLOGY; *HEALTH EFFECTS; OCCUPATIONAL HEALTH; *PIPES; PUBLIC HEALTH; RESEARCH REPORTS; *WATER DISTRIBUTION; WATER QUALITY

DESCRIPTIVE NOTE: 3P. PB81-212169

ABSTRACT: THE PRIMARY REASON FOR CONCERN ABOUT DRINKING WATER CONTAINING ASBESTOS FIBERS IS THE ASSOCIATION BETWEEN OCCUPATIONAL ASBESTOS EXPOSURE AND GASTROINTESTINAL CANCER SHOWN IN A NUMBER OF OCCUPATIONAL EPIDEMIOLOGY STUDIES. ALTHOUGH THE ASBESTOS WORKER IS EXPOSED TO AIRBORNE ASBESTOS IT HAS BEEN CLEARLY DEMONSTRATED THAT A HIGH PERCENTAGE OF INHALED FIBERS DEPOSITED IN THE LUNG ARE CLEARED AND SWALLOWED. SO, THEY ARE ALSO EXPOSED TO INGESTED FIBERS. THERE HAVE BEEN A NUMBER OF RECENT STUDIES WHICH HAVE SHOWN THAT ASBESTOS FIBERS CAN PENETRATE THE DIGESTIVE TRACT AND EVEN ARE EXCRETED THROUGH THE URINE. AVAILABLE STUDIES AND ONGOING RESEARCH ARE REVIEWED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006879

PUBLICATION DATE: APR 81

TITLE: HEALTH RISKS OF ORGANICS IN LAND APPLICATION.

PERSONAL AUTHOR: MAJETI, VIMALA A.; CLARK, C. SCOTT

DESCRIPTOR: *AGRICULTURE; *HEALTH EFFECTS; *LAND APPLICATION; *OCCUPATIONAL HEALTH; *ORGANIC COMPOUNDS; *PUBLIC HEALTH; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 12P. PB81-212235

ABSTRACT: THE POTENTIAL HEALTH PROBLEMS ASSOCIATED WITH THE PRESENCE OF PERSISTENT ORGANIC CHEMICALS IN WASTEWATER AND SLUDGE, WHEN APPLIED TO AGRICULTURAL LANDS, ARE REVIEWED. THE TOPICS CONSIDERED INCLUDE: THE TYPE AND AMOUNTS OF ORGANIC CHEMICALS PRESENT IN WASTEWATER AND SLUDGE, THEIR FATE ON LAND, POTENTIAL HEALTH EFFECTS ON WORKERS AND OTHER EXPOSED POPULATIONS, AND EFFECTS ON THE QUALITY OF GROUND AND SURFACE WATERS AND ON THE FOOD CHAIN. BECAUSE INFORMATION ON THE EFFECTS OF CHRONIC EXPOSURES IS SCARCE, SEVERAL EXAMPLES ARE GIVEN FROM CASES OF ACUTE EXPOSURE, USUALLY TO WASTEWATER TREATMENT PLANT WORKERS. THERE IS INSUFFICIENT INFORMATION AVAILABLE TO ASSESS THE LONGTERM HEALTH RISKS OF EXPOSURE TO ORGANICS IN WASTEWATER TREATMENT PLANTS OR AT LAND APPLICATION SITES. FURTHER RESEARCH IS RECOMMENDED ON THE UPTAKE OF ORGANIC CHEMICALS BY FOOD CROPS. LONG-TERM FOLLOW-UP IS RECOMMENDED FOR POPULATIONS WHO HAVE HAD ACUTE SHORT-TERM EXPOSURE TO ORGANIC CHEMICALS FROM WASTE MATERIALS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006887

PUBLICATION DATE: APR 77

TITLE: AQUACULTURE SYSTEMS FOR WASTEWATER TREATMENT: AN ENGINEERING ASSESSMENT.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGIES; *AQUACULTURE; *AQUATIC ENVIRONMENTS; *ASSESSMENT; *ENGINEERING; *EVALUATION; *RESEARCH REPORTS; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER TREATMENT; *WETLANDS

DESCRIPTIVE NOTE: 80P. PB81-156689

ABSTRACT: THIS PUBLICATION CONTAINS THE RESULTS OF AN EFFORT TO ASSESS THE CURRENT STATUS OF AQUACULTURE TECHNOLOGIES FOR WASTEWATER TREATMENT. THE ASSESSMENT INCLUDES AN OVERVIEW AND INDIVIDUAL ENGINEERING ASSESSMENTS COVERING VARIOUS WASTEWATER AQUACULTURE SYSTEMS INVOLVING WETLANDS PROCESSES, AQUATIC PLANT PROCESSES, AND COMBINED AQUATIC PROCESSES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006895

TITLE: RESEARCH REPORTS - SEPTIC TANK/WATER SOFTENER.

DESCRIPTOR: *EFFLUENT; *ONSITE DISPOSAL; *PERFORMANCE EVALUATION; *REGENERATION WASTES; *RESEARCH REPORTS; *SEPTIC TANKS; *SEWAGE DISPOSAL SYSTEMS; *SOIL ABSORPTION; SOILS; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *WATER SOFTENERS

DESCRIPTIVE NOTE: 99P. PRICE: $10.00

ABSTRACT: THIS THREE-PART REPORT OUTLINES RESULTS OF EXPERIMENTAL RESEARCH AIMED AT ESTABLISHING THE EFFECTS OF WATER SOFTENER BACKWASH WATER AND REGENERATION WASTES ON THE PERFORMANCE OF ONSITE SEWAGE DISPOSAL SYSTEMS OR SEPTIC TANKS. PART I DESCRIBES SEPTIC TANK OPERATIONS, STATES THE RESEARCH PROBLEM, AND EXPLAINS RESULTS IN LAYMEN'S TERMS. PART II EXAMINES A STUDY THAT EVALUATES THE EFFECT OF WATER SOFTENER REGENERATIONAL EFFLUENT ON PRIVATE SEPTIC TANK SOIL ABSORPTION WASTE DISPOSAL SYSTEMS. PART III DETAILS THE RESULTS OF A STUDY THAT DETERMINES THE EFFECT OF SOFTENER REGENERANT EFFLUENT ON AEROBIC-TYPE TREATMENT SYSTEMS.

AVAILABILITY: WATER QUALITY RESEARCH COUNCIL, 477 EAST BUTTERFIELD ROAD, SUITE 110, LOMBARD, IL 60148

IRIS ACCESSION NUMBER: EW006897

PUBLICATION DATE: SEP 81

TITLE: WATER: TOO MUCH, TOO LITTLE, TOO BAD?

PERSONAL AUTHOR: WOLMAN, ABEL

DESCRIPTOR: AGRICULTURE; DRINKING WATER; DROUGHTS; FLOODS; HYDROPOWER; INDUSTRY; *MANAGEMENT; *STATE-OF-THE-ART REVIEWS; *WATER QUALITY; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 83-86P.

ABSTRACT: THIS ARTICLE PRESENTS A BROAD YET COMPREHENSIVE OVERVIEW OF THE PROBLEMS ASSOCIATED WITH THE WORLD'S WATER SUPPLY. TOPICS INCLUDED IN THIS DISCUSSION ARE: WATER FOR DRINKING AND WASHING, WATER FOR AGRICULTURE, WATER FOR INDUSTRY, HYDROPOWER, THE HAZARDS OF WATER, AND LONG-TERM POSSIBILITIES.

AVAILABILITY: CONSULTING ENGINEER, V57 N3

IRIS ACCESSION NUMBER: EW006898

PUBLICATION DATE: SEP 81

TITLE: WATER COST ENCOURAGES REUSE AND CONSERVATION.

PERSONAL AUTHOR: WESTERHOFF, GARRET P.

DESCRIPTOR: *CONSERVATION; ECONOMIC FACTORS; INDUSTRY; LEGISLATION; *MANAGEMENT; PLANNING; TECHNOLOGY; *WATER CONSERVATION; *WATER RESOURCES; *WATER REUSE; *WATER SUPPLY

DESCRIPTIVE NOTE: 87-90P.

ABSTRACT: THIS ARTICLE EXAMINES VARIOUS ASPECTS OF WATER REUSE AND CONSERVATION. TOPICS DISCUSSED INCLUDE LEGISLATION, INDUSTRIAL WATER USE, PLANNING AND MANAGEMENT, ECONOMIC FACTORS, ALTERNATIVES EVALUATION, AND AVAILABLE TECHNOLOGY. A CLAIM IS MADE THAT WATER REUSE PROVIDES THE LINK BETWEEN NATIONAL GOALS OF WATER CONSERVATION AND WATER POLLUTION CONTROL, SINCE BY RECLAIMING AND REUSING WASTEWATER WE PRESERVE THE QUALITY OF WATERWAYS AND EXTEND SUPPLIES OF NATURAL WATERS.

AVAILABILITY: CONSULTING ENGINEER, V57 N3

IRIS ACCESSION NUMBER: EW006899

PUBLICATION DATE: SEP 81

TITLE: COMPUTER: THE WATER MANAGEMENT TOOL.

PERSONAL AUTHOR: ARMSTRONG, RONALD N.; TAYLOR, ROBERT S.

DESCRIPTOR: *COMPUTER APPLICATION; *COMPUTERS; *MANAGEMENT; MODELING; PLANNING; PROBLEM SOLVING; *STATE-OF-THE-ART REVIEWS; TECHNOLOGICAL ADVANCEMENTS; WATER QUALITY; *WATER RESOURCES; WATER SUPPLY

DESCRIPTIVE NOTE: 97-100P.

ABSTRACT: THIS ARTICLE EXAMINES THE INCREASINGLY IMPORTANT ROLE THAT COMPUTERS ARE PLAYING IN WATER RESOURCES MANAGEMENT. COMPUTERS HAVE BEEN USED TO PREDICT, PLAN AND MONITOR SUPPLIES; SIMULATE THE DYNAMICS OF THE WATER CYCLE; MONITOR THE EFFECTS OF SHORT-TERM OR LONG-TERM DROUGHT, POLLUTION, AND SALTWATER INTRUSION; AND EVALUATE SUCH SOCIOECONOMIC FACTORS AS INCREASING OR DECREASING POPULATION. SPECIFIC ATTENTION IS FOCUSED ON WATER SUPPLY MANAGEMENT IN FLORIDA, WATER POLLUTION PROBLEMS, AND INNOVATIVE APPLICATIONS.

AVAILABILITY: CONSULTING ENGINEER, V57 N3

IRIS ACCESSION NUMBER: EW006900

PUBLICATION DATE: SEP 81

TITLE: UPDATING ANTIQUATED CITY WATER SYSTEMS.

PERSONAL AUTHOR: WHEELER, WILLIAM

DESCRIPTOR: *CASE STUDIES; DESIGN; *MAINTENANCE; PLANNING; PROBLEM SOLVING; *PROGRAM DESCRIPTIONS; *REHABILITATION; *WATER DISTRIBUTION; WATER QUALITY; WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 101-105P.

ABSTRACT: THIS ARTICLE ILLUSTRATES HOW A CITY CAN ADDRESS WATER DISTRIBUTION, STORAGE, AND QUALITY PROBLEMS BY PLANNING AND IMPLEMENTING A MULTISTAGE WATER SYSTEM

IMPROVEMENT PROGRAM. SPECIFIC ATTENTION IS FOCUSED ON PRE-PLANNING INVESTIGATIONS, COMPUTER APPLICATION TO PROBLEM SOLVING, AND PROPOSED FACILITIES DESIGN.

AVAILABILITY: CONSULTING ENGINEER, V57 N3

IRIS ACCESSION NUMBER: EW006901

PUBLICATION DATE: SEP 81

TITLE: COME WATCH WATER TAKE A BATH.

PERSONAL AUTHOR: PIROZZOLO, DICK D.; ELKERTON, STANLEY

DESCRIPTOR: *ATTITUDES; *COMMUNITY RELATIONS; *CONSTRUCTION; *FACILITIES; MEDIA; OPERATIONS (WASTEWATER); PLANNING; *PROGRAM DESCRIPTIONS; *PUBLIC INFORMATION; *PUBLIC RELATIONS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 121-122, 125-126P.

ABSTRACT: THIS ARTICLE DESCRIBES HOW A PUBLIC INFORMATION/PUBLIC RELATIONS PROGRAM CAN WIN GENERAL PUBLIC APPROVAL AND SUPPORT FOR A WASTEWATER TREATMENT PLANT. THE ARTICLE DISCUSSES THE MULTIFACETED APPROACH TAKEN FOR A PLANT RECENTLY CONSTRUCTED AT FOND DU LAC, WISCONSIN. TOURS OF THE FACILITY AND MEDIA COVERAGE ARE DISCUSSED IN DETAIL.

AVAILABILITY: CONSULTING ENGINEER, V57 N3

IRIS ACCESSION NUMBER: EW006911

PUBLICATION DATE: SEP 81

TITLE: ADVANCES IN THE IDENTIFICATION AND ANALYSIS OF ORGANIC POLLUTANTS IN WATER - VOLUME 1.

PERSONAL AUTHOR: KEITH, LAWRENCE H.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DRINKING WATER; *IDENTIFICATION; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *ORGANIC COMPOUNDS; *POLLUTANTS; *POST SECONDARY EDUCATION; *SAMPLING; *STATE-OF-THE-ART REVIEWS; *WASTEWATER ANALYSIS; *WATER QUALITY

DESCRIPTIVE NOTE: 500P. PRICE: $39.95 - VOLUME 1; $79.90 SET - VOLUMES 1 & 2.

ABSTRACT: THIS TEXT PRESENTS A STATE-OF-THE-ART REVIEW OF THE METHODOLOGY FOR THE ANALYSIS OF ORGANIC COMPOUNDS IN ALL TYPES OF WATER SAMPLES INCLUDING PURE DRINKING WATER AND UNTREATED INDUSTRIAL WASTEWATERS. MAJOR SECTIONS IN THIS VOLUME INCLUDE: PROTOCOLS, HIGH RESOLUTION GAS CHROMATOGRAPHY, STABLE LABELING, MICROEXTRACTION, RESIN ABSORPTION, HIGH PERFORMANCE, LIQUID CHROMATOGRAPHY, AND DERIVATIZATION.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW006912

PUBLICATION DATE: SEP 81

TITLE: ADVANCES IN THE IDENTIFICATION AND ANALYSIS OF ORGANIC POLLUTANTS IN WATER - VOLUME 2.

PERSONAL AUTHOR: KEITH, LAWRENCE H.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DRINKING WATER; *IDENTIFICATION; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *ORGANIC COMPOUNDS; *POLLUTANTS; *POST SECONDARY EDUCATION; *SAMPLING; *STATE-OF-THE-ART REVIEWS; *WASTEWATER ANALYSIS; *WATER QUALITY

DESCRIPTIVE NOTE: 650P. PRICE: $39.95 - VOLUME 2; $79.90 SET - VOLUMES 1 & 2.

ABSTRACT: THIS TEXT PRESENTS A STATE-OF-THE-ART REVIEW OF THE METHODOLOGY FOR THE ANALYSIS OF ORGANIC COMPOUNDS IN ALL TYPES OF WATER SAMPLES INCLUDING PURE DRINKING WATER AND UNTREATED INDUSTRIAL WASTEWATERS. MAJOR SECTIONS IN THIS VOLUME INCLUDE: COMPUTERIZED DATA, GROB CLOSED-LOOP-STRIPPING, SPECIALIZED PURGING TECHNIQUES, DRINKING WATER ANALYSES, SURFACE WATER ANALYSES, AND INDUSTRIAL WASTEWATER ANALYSIS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW006913

PUBLICATION DATE: MAR 81

TITLE: USER'S MANUAL FOR THE EVALUATION AND SENSITIVITY ANALYSIS PROGRAM (ESAP).

PERSONAL AUTHOR: MUMPOWER, JERYL; BOLLACKER, LEE

DESCRIPTOR: *DECISION-MAKING; *ENVIRONMENTAL IMPACT; *EVALUATION; *MANAGEMENT; *MANUALS; *NATURAL RESOURCES; *PLANNING; *PROGRAM DESCRIPTIONS; *WATER RESOURCES

DESCRIPTIVE NOTE: 284P. AD-A099-307/1

ABSTRACT: THE EVALUATION AND SENSITIVITY ANALYSIS PROGRAM (ESAP) IS AN ENVIRONMENTAL PLANNING TECHNIQUE FOR THE EVALUATION OF ALTERNATIVE WATER RESOURCE MANAGEMENT PLANS. ESAP IS BASED ON A WEIGHTING-SCALING APPROACH TO IMPACT ASSESSMENT AND ALTERNATIVE EVALUATION. THE EVALUATION OF THE DESIRABILITY OR ACCEPTABILITY OF AN ALTERNATIVE IS BASED ON A SYSTEMATIC COMBINATION OF INFORMATION ABOUT THE IMPACTS ON THE NATURAL AND CULTURAL RESOURCES AND INFORMATION ABOUT THE IMPORTANCE (WEIGHT) AND PREFERRED LEVELS OF SUCH RESOURCES. INFORMATION FOR A NUMBER OF INDIVIDUALS OR GROUPS IS USED TO DETERMINE HOW SENSITIVE THEIR EVALUATIONS ARE TO DIFFERENCES IN JUDGMENTS ABOUT THE IMPORTANCE AND PREFERRED LEVELS OF RESOURCES OR TO UNCERTAINTY IN PROJECTIONS OF RESOURCE IMPACTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006924

PUBLICATION DATE: SEP 81

TITLE: JOB INSTRUCTION: FOUR STEPS TO SUCCESS.

PERSONAL AUTHOR: GOLD, LEON

DESCRIPTOR: *EDUCATIONAL PROGRAMS; *EDUCATIONAL STRATEGIES; *INSTRUCTION; *JOB TRAINING; *POST SECONDARY EDUCATION; *SUPERVISION; *SUPERVISORY TRAINING; *TRAINING

DESCRIPTIVE NOTE: 28-32P.

ABSTRACT: THIS ARTICLE PRESENTS A METHODOLOGY FOR A JOB INSTRUCTION PROGRAM FOR SUPERVISORS. THE FOUR STEP METHOD IN THIS ARTICLE COVERS PLANNING, ASSESSING TRAINING NEEDS, APPLICATION OF TRAINING PROGRAM, AND GENERAL EVALUATION. THE BASICS OF EDUCATION AND INSTRUCTION ARE ALSO EXAMINED.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL, V35 N9

IRIS ACCESSION NUMBER: EW006925

PUBLICATION DATE: SEP 81

TITLE: PERFORMANCE-BASED LINE SUPERVISOR TRAINING.

PERSONAL AUTHOR: CRUMB, C. V.

DESCRIPTOR: *CERTIFICATION; *EDUCATIONAL STRATEGIES; *INSTRUCTION; *JOB SKILLS; *JOB TRAINING; *MANAGEMENT; *POST SECONDARY EDUCATION; *SUPERVISION; *SUPERVISORY TRAINING; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 44-47P.

ABSTRACT: THIS ARTICLE PRESENTS AN ANALYSIS OF THE TRAINING NEEDS OF LINE SUPERVISORY PERSONNEL AND THE SUBSEQUENT DEVELOPMENT OF TRAINING PROGRAMS TO MEET THOSE NEEDS. THE TRAINING EFFORTS INVOLVE THE AREAS OF ORIENTATION IN THE USE OF STAFF SUPPORT, A CERTIFICATION OF THE KNOWLEDGE AND SKILLS REQUIRED, AND AN UPGRADING IN SUPERVISORY SKILLS IN VARIOUS JOB PERFORMANCE AREAS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL, V35 N9

IRIS ACCESSION NUMBER: EW006926

PUBLICATION DATE: SEP 81

TITLE: SUPERVISORY SKILL DEVELOPMENT.

PERSONAL AUTHOR: TAUBER, MARK S.

DESCRIPTOR: *EDUCATIONAL STRATEGIES; *INSTRUCTION; *JOB SKILLS; *MANAGEMENT; *POST SECONDARY EDUCATION; *SKILL DEVELOPMENT; *SUPERVISION; *SUPERVISORY TRAINING; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 49-51, 54P.

ABSTRACT: THIS ARTICLE DISCUSSES SEVERAL CURRENT METHODS OF SUPERVISORY SKILL DEVELOPMENT. THE EMPHASIS IS ON PROGRAMS THAT FOLLOW THE STANDARD SUPERVISOR TRAINING PERIOD. SPECIFIC ATTENTION IS FOCUSED ON TWO APPROACHES: REUNIONS AND SUPPORT GROUPS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL, V35 N9

IRIS ACCESSION NUMBER: EW006927

PUBLICATION DATE: SEP 81

TITLE: HOW TO GET ACCURATE SELF-REPORTS OF TRAINING OUTCOMES.

PERSONAL AUTHOR: MEXOFF, BOB

DESCRIPTOR: *COMPARATIVE ANALYSIS; *EVALUATION; *EVALUATION METHODS; *GUIDELINES; *MANAGEMENT; *POST SECONDARY EDUCATION; *SELF EVALUATION; *TESTING; TESTING PROBLEMS; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 56-61P.

ABSTRACT: THIS ARTICLE DISCUSSES WHY SOME TRAINING PROGRAMS FAIL AT THE EVALUATION STAGE. THE "SELF-REPORT" EVALUATION APPROACH IS CRITIQUED AND GUIDELINES ARE PROVIDED FOR THE "PRE-THEN-POST TESTING" METHOD. FINALLY, A CASE EXAMPLE IS GIVEN TO COMPARE THE TWO METHODS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL, V35 N9

IRIS ACCESSION NUMBER: EW006928

PUBLICATION DATE: SEP 81

TITLE: LEARNING THROUGH THE USE OF SIMULATION GAMES.

PERSONAL AUTHOR: OLIVAS, LOUIS; NEWSTROM, JOHN W.

DESCRIPTOR: *EDUCATIONAL GAMES; *GAMES; *GUIDELINES; *INSTRUCTION; *LEARNING; *MOTIVATION; *MANAGEMENT; *POST SECONDARY EDUCATION; *SIMULATION; *TEACHING METHODS; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 63-66P.

ABSTRACT: THIS ARTICLE PRESENTS A RATIONALE FOR THE USE OF SIMULATION GAMES IN INSTRUCTION, GUIDELINES FOR THEIR USE, AND AN EXPLANATION OF HOW LEARNING IS FACILITATED THROUGH THE USE OF SIMULATION GAMES. EVIDENCE IS GIVEN TO SUGGEST THAT GAMES CAN CHANGE ATTITUDES, DEVELOP INTERPERSONAL SKILLS, AND ACHIEVE READY ACCEPTANCE BY TRAINEES.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL, V35 N9

IRIS ACCESSION NUMBER: EW006929

PUBLICATION DATE: SEP 81

TITLE: FOUR METHODS OF JOB ANALYSIS.

PERSONAL AUTHOR: MARKOWITZ, JERROLD

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *EVALUATION; *GUIDELINES; *JOB ANALYSIS; *MANAGEMENT; *POST SECONDARY EDUCATION; *SUPERVISORS; *SUPERVISORY TRAINING

DESCRIPTIVE NOTE: 112-118P.

ABSTRACT: THIS ARTICLE DISCUSSES FOUR METHODS OF JOB ANALYSIS. THESE ARE: OBSERVATION, INTERVIEW, JURY OF EXPERTS, AND QUESTIONNAIRE. THE FOCUS IS ON BASIC CHARACTERISTICS OF THESE METHODS AND A DETAILED DESCRIPTION OF EACH IS GIVEN INCLUDING GUIDELINES FOR APPLICATION.

AVAILABILITY: TRAINING & DEVELOPMENT JOURNAL, V35 N9

IRIS ACCESSION NUMBER: EW006930

PUBLICATION DATE: SEP 81

TITLE: DETROIT'S WWTP: ONE OF THE WORLD'S BIGGEST.

PERSONAL AUTHOR: DAVANZO, A. C.

DESCRIPTOR: *CASE STUDIES; DESIGN; EQUIPMENT; *FACILITIES; *MICHIGAN; MAINTENANCE; MANAGEMENT; *OPERATIONS (WASTEWATER); POLLUTION CONTROL; *PROGRAM DESCRIPTIONS; WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 38-41P.

ABSTRACT: THIS ARTICLE EXAMINES DETROIT, MICHIGAN'S WASTEWATER TREATMENT PLANT FACILITIES. INCLUDED ARE DISCUSSIONS ON SEWAGE SYSTEMS, WASTEWATER COLLECTION, HISTORICAL PERSPECTIVES, OPERATING CAPACITIES, DESIGN, TRAINING PROGRAMS, SOLIDS DISPOSAL, AND OPERATIONS.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006931

PUBLICATION DATE: SEP 81

TITLE: REACTION KINETICS IN BIOCHEMICAL OXIDATION PLANTS.

PERSONAL AUTHOR: VIVONA, MORRIS A.

DESCRIPTOR: *BIOCHEMICAL OXIDATION; *BIOLOGICAL TREATMENT; *DESIGN; *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *REACTION KINETICS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 47-49P.

ABSTRACT: THIS ARTICLE EXAMINES THE RELATIONSHIP BETWEEN FLOW REACTORS AND REACTION KINETICS AS IT PERTAINS TO THE DESIGN OF BIOLOGICAL TREATMENT FACILITIES. INCLUDED ARE EXAMPLES OF A PRACTICAL DESIGN CONCEPT WHICH CAN BE USED FOR VARYING WASTEWATER FLOWS.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006932

PUBLICATION DATE: SEP 81

TITLE: TYING UP TCE.

PERSONAL AUTHOR: STINGHAL, ASHOK K.

DESCRIPTOR: *CONTAMINANTS; *COST EFFECTIVENESS; *COSTS; *DRINKING WATER; *GROUNDWATER; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *TOXIC SUBSTANCES; *TRICHLOROETHYLENE; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 56-63P.

ABSTRACT: THIS ARTICLE EXAMINES METHODS FOR REMOVING TRICHLOROETHYLENE (TCE) FROM GROUNDWATER. CONTAMINATED GROUNDWATER WAS PURGED, AERATED, PUMPED INTO SEWERS, AND ADDITIONAL STUDY RESULTS ARE INCLUDED FOR A COST-EFFECTIVENESS EVALUATION OF THE VARIOUS TECHNIQUES.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006933

PUBLICATION DATE: SEP 81

TITLE: MANAGING A PUMP GANG FOR LONG LIFE.

PERSONAL AUTHOR: BRINKER, MICHAEL J.

DESCRIPTOR: *CASE STUDIES; *DESIGN; *EQUIPMENT; FACILITIES; MAINTENANCE; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PUMPS; SEWAGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 66-68P.

ABSTRACT: THIS ARTICLE DISCUSSES VARIOUS ASPECTS OF THE MANAGEMENT OF A GANG OF FIVE MAIN SEWAGE PUMPS FOR AN ELIZABETH, NEW JERSEY WASTEWATER TREATMENT PLANT. THE PUMPS HANDLE 75 MGD OF PRIMARY EFFLUENT, LIFTING THE PROCESS FLOW FROM PRIMARY TO SECONDARY TREATMENT. WITH ENCLOSED, NON-CLOG IMPELLERS, THEY ARE PROVIDING MAINTENANCE-FREE SERVICE AND ARE EXPECTED TO DO SO OVER A LONG SERVICE LIFE.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006934

PUBLICATION DATE: SEP 81

TITLE: COOPERATIVE PLANNING SMOOTHS WAY AHEAD FOR HOUSTON.

PERSONAL AUTHOR: MANNING, MARTIN J.; AND OTHERS

DESCRIPTOR: *ADMINISTRATION; *CASE STUDIES; CONSTRUCTION; DESIGN; EQUIPMENT; *FACILITIES; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PLANNING; SEWAGE; SLUDGE; *TEXAS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 70-76P.

ABSTRACT: THIS ARTICLE EXAMINES THE PLANNING, ADMINISTRATION, AND OPERATIONS OF THE WASTEWATER TREATMENT FACILITIES OF HOUSTON, TEXAS. ATTENTION IS FOCUSED ON THE SPECIFICATIONS OF THE CITY'S VARIOUS TREATMENT FACILITIES INCLUDING A NEW 200 MGD, TWO STAGE, PURE OXYGEN ACTIVATED SLUDGE, ADVANCED WASTEWATER TREATMENT PLANT AND A 125 TON/DAY SLUDGE PROCESSING AND DISPOSAL PLANT. ALSO DISCUSSED IS A REPORT ANALYZING AND IDENTIFYING THE SERVICES AND METHODS WHEREBY CONSTRUCTION MANAGEMENT SKILLS COULD ASSIST THE CITY.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006935

PUBLICATION DATE: SEP 81

TITLE: SIMULATING EFFECTS OF COMBINED SEWER OVERFLOWS.

PERSONAL AUTHOR: SHAPIRO, HOWARD M.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CASE STUDIES; *COMBINED SEWER OVERFLOWS; *DATA ANALYSIS; DESIGN; *FACILITIES; *MODELING; MODELS; *PLANNING; *SURFACE RUNOFF; *SEWERS; *STORMWATER; *WASTEWATER COLLECTION; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 79-84P.

ABSTRACT: THIS ARTICLE EXAMINES THE PLANNING PROCESS THAT THE COUNTY OF CHEMUNG, NEW YORK UNDERTOOK FOR UPGRADING THEIR WASTEWATER TREATMENT FACILITIES. OF PRIME CONCERN WAS THE EFFECT OF COMBINED SEWER OVERFLOW. SPECIFIC REQUIREMENTS DICTATED THE USE OF A CONTINUOUS, DYNAMIC, MULTIPLE EVENT SIMULATION MODEL. THE STORM-WQRRS PACKAGE, DEVELOPED BY THE CORPS OF ENGINEERS, WAS CHOSEN. THE USE OF THIS MODEL FOR CHEMUNG COUNTY IS DISCUSSED IN DETAIL.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006936

PUBLICATION DATE: SEP 81

TITLE: CHEMICAL ENGINEERING ADVANCES IN WWT.

PERSONAL AUTHOR: SHAW, ROBERT G.

DESCRIPTOR: *CHEMICAL ENGINEERING; *DESIGN; *ENGINEERING; *OPERATIONS (WASTEWATER); *PROCESS DESIGN; *SEWAGE TREATMENT; SLUDGE; *TECHNOLOGICAL ADVANCEMENTS; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 86-92P.

ABSTRACT: THIS ARTICLE DISCUSSES THE ADVANCES IN WASTEWATER TREATMENT DESIGN AND TECHNIQUES THAT HAVE BEEN PUT FORTH BY CHEMICAL ENGINEERS IN AUSTRALIA AND CANADA. TOPICS SPECIFICALLY ADDRESSED INCLUDE: IN-MAIN TREATMENT, TREATMENT TIME, OXYGEN SUPPLY, SLUDGE DISPOSAL, OXYGEN ACTIVATED SLUDGE PROCESS (OASP), FLUIDIZED BED SYSTEMS, ATTACHED GROWTH BEDS, SUSPENDED GROWTH BEDS, SEDIMENTATION ALTERNATIVES, AND ANAEROBIC/AEROBIC DIGESTION.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006937

PUBLICATION DATE: SEP 81

TITLE: COST COMPARISON OF ALTERNATIVE METHODS OF SLUDGE DISPOSAL.

PERSONAL AUTHOR: MOORE, ROBERT C.

DESCRIPTOR: *COST EFFECTIVENESS; *COSTS; *ECONOMIC FACTORS; EVALUATION; *HEAVY METALS; *LAND APPLICATION; *OPERATIONS (WASTEWATER); *PLANNING; *SLUDGE; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 94-100P.

ABSTRACT: THIS ARTICLE EXAMINES THE COST-EFFECTIVENESS OF VARIOUS SLUDGE DISPOSAL METHODS. FACTORS INCLUDED IN THE APPROACH TAKEN IN THIS ARTICLE INCLUDE: ESTIMATES OF CONSTRUCTION; OPERATION AND MAINTENANCE; DISPOSAL LAND USES; EPA REGULATIONS; PRESENCE OF HEAVY METALS IN THE SLUDGE; PHYSICAL FORM OF SLUDGE; PRETREATMENT METHODS; WASTE QUANTITY; DISPOSAL METHODS, SPECIFICALLY INCINERATION; SOCIAL AND ENVIRONMENTAL FACTORS; AND, FUTURE ECONOMIC FACTORS, SPECIFICALLY INTEREST RATES.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006938

PUBLICATION DATE: SEP 81

TITLE: PROPER PRECOATING TO IMPROVE SLUDGE DEWATERING.

PERSONAL AUTHOR: WIRSIG, O. ALAN

DESCRIPTOR: *DEWATERING; *EQUIPMENT; *FILTERS; *GUIDELINES; *OPERATIONS (WASTEWATER); *PRECOATING; *SLUDGE; *SLUDGE TREATMENT

DESCRIPTIVE NOTE: 100-102P.

ABSTRACT: THIS ARTICLE PRESENTS GUIDELINES ON THE PROPER PRECOAT METHODS AND MATERIALS TO AID IN SLUDGE DEWATERING. SPECIFICALLY ADDRESSED ARE THE FOLLOWING RECOMMENDATIONS: CLEAN FILTER CLOTHS, CLOTHS WITH PROPER OPENING SIZE, CORRECT GRADE OF PRECOAT, AND CORRECT PRECOAT AMOUNT AND CONCENTRATION.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006939

PUBLICATION DATE: SEP 81

TITLE: FILTERED VERSUS NON-FILTERED ALGAE COUNTS.

PERSONAL AUTHOR: LIN, S. D.; AND OTHERS

DESCRIPTOR: *ALGAE; *ALGAL COUNTS; *ANALYTICAL TECHNIQUES; *DATA COLLECTION; *FILTERS; *FILTRATION; *MATHEMATICAL APPLICATIONS; *RESEARCH REPORTS; SAMPLING; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 105-106P.

ABSTRACT: THIS ARTICLE REPORTS ON RESEARCH ON EVALUATION OF VARIOUS METHODS FOR COUNTING ALGAE IN WATERWORK SYSTEMS. FINDINGS REVEAL THAT THE TECHNIQUES OF CONCENTRATING BY FILTRATION GAVE MORE ALGAL SPECIES AND HIGHER TOTAL ALGAL DENSITY THAN THE NON-FILTERED TECHNIQUE. THE DIRECT SEDGWICK-RAFTER (NON-FILTERED) COUNTING METHOD IS NOT RECOMMENDED WHEN ALGAL COUNTS ARE LESS THEN 3,000 PER ML.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006944

TITLE: GLOSSARY: WATER AND WASTEWATER CONTROL ENGINEERING.

DESCRIPTOR: CHEMISTRY; *DEFINITIONS; *ENGINEERING; *GLOSSARIES; HYDROLOGY; *INDEXES; *REFERENCE MATERIALS; WATER; *WATER SUPPLY; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 456P. PRICE: $17.50 MEMBER; $25.00 NON-MEMBER.

ABSTRACT: THIS REVISED EDITION PRESENTS UP-TO-DATE DEFINITIONS RELATING TO THE WATER AND WASTEWATER PROFESSIONS. THE FOCUS IS TO ELIMINATE OBSOLETE TERMS AND REFLECT THE GREAT IMPACT THAT CHEMISTRY AND CHEMICAL ENGINEERING HAVE HAD ON THE FIELD. TERMS REGULARLY USED BY SCIENTISTS AND ENGINEERS ARE ALPHABETICALLY LISTED FOR CONVENIENT REFERENCE.

AVAILABILITY: AWWA DATA PROCESSING DEPT., 6666 WEST QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW006947

TITLE: COMMUNITY RELATIONS PROGRAM - WATERSHED PLAN.

DESCRIPTOR: *CANADA; *COMMUNITY RELATIONS; *CONSERVATION; *CONSERVATION EDUCATION; *COSTS; ENVIRONMENTAL EDUCATION; FACILITIES; LAND MANAGEMENT; *MANAGEMENT; *PROGRAM DESCRIPTIONS; PUBLIC RELATIONS; RECREATION; *WATER RESOURCES; *WATERSHEDS

DESCRIPTIVE NOTE: 20P.

ABSTRACT: THIS PUBLICATION DISCUSSES THE COMMUNITY RELATIONS PROGRAM FOR THE WATER RESOURCES AND WATERSHED MANAGEMENT PLAN OF THE METROPOLITAN TORONTO AND REGION CONSERVATION AUTHORITY. SECTIONS INCLUDE: PROBLEMS AND IMPLICATIONS; POLICY; PROGRAM DETAILS; AND, COSTS AND IMPLICATIONS. EACH OF THESE TOPICS IS EXAMINED IN RELATION TO CONSERVATION AND PUBLIC INFORMATION, AND CONSERVATION EDUCATION FOR SCHOOL CHILDREN.

AVAILABILITY: THE METROPOLITAN TORONTO AND REGION CONSERVATION AUTHORITY, 5 SHORELINE DRIVE, DOWNSVIEW, M3N 1S4, CANADA

IRIS ACCESSION NUMBER: EW006948

PUBLICATION DATE: 81

TITLE: ADSORPTION OF INORGANICS AT SOLID-LIQUID INTERFACES.

PERSONAL AUTHOR: ANDERSON, MARC A.

DESCRIPTOR: *ADSORPTION; *CHEMICAL REACTIONS; *CHEMISTRY; COLLOID CHEMISTRY; *ENGINEERING; *HIGHER EDUCATION; *INSTRUCTIONAL MATERIALS; IONS; *MODELS; SOILS; *STATE-OF-THE-ART REVIEWS; *WATER CHEMISTRY

DESCRIPTIVE NOTE: 357P. PRICE: $39.95

ABSTRACT: THIS BOOK IS DESIGNED TO COMPARE AND CONTRAST THE BEHAVIOR OF INORGANIC IONS ADSORBED AT THE SOLID-LIQUID INTERFACE. IT SERVES AS AN UP-TO-DATE REVIEW ON THE SUBJECT OF ADSORPTION AND CONCENTRATES ON THE PRESENT MECHANISMS AND MODELS ASCRIBED TO THESE REACTIONS. THE BOOK IS INTENDED FOR WATER CHEMISTS, SANITARY ENGINEERS, AND SOIL AND COLLOID CHEMISTS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW006949

PUBLICATION DATE: OCT 81

TITLE: HYDRAULIC TABLES.

PERSONAL AUTHOR: BOUTHILLIER, PATRICK H.

DESCRIPTOR: *DESIGN; *DRAINS; *GUIDES; HANDBOOKS;

*HYDRAULICS; *METRIC SYSTEM; *PIPES; PLUMBING; *SEWERS; *WASTEWATER COLLECTION; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 150P. PRICE: $12.95

ABSTRACT: THIS BOOK CONTAINS HYDRAULIC TABLES FOR USE WITH THE S.I. (METRIC) SYSTEM OF UNITS. PROVIDED ARE HYDRAULIC TABLES FOR WATER LINES, SEWERS, DRAINS, AND PLASTIC PIPES. THESE TABLES USE THE RESISTANCE CONCEPT FOR USE IN HYDRAULIC PROBLEMS INVOLVING PIPES CARRYING WATER. ALSO DISCUSSED IS THE HYDRAULICS OF COPPER PIPING AND PLUMBING DESIGN.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW006950

PUBLICATION DATE: OCT 81

TITLE: FLUID FLOW: PUMPS, PIPES AND CHANNELS.

PERSONAL AUTHOR: CHEREMISINOFF, NICHOLAS P.

DESCRIPTOR: CHANNELS; *DESIGN; *ENGINEERING; *FLUID DYNAMICS; *FLUIDS; *FLUID FLOW; *HIGHER EDUCATION; *INSTRUCTIONAL MATERIALS; *MATHEMATICAL APPLICATIONS; *PIPES; *PROBLEM SOLVING; *PUMPS; *REFERENCE MATERIALS; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 700P. PRICE: $34.95

ABSTRACT: THIS REFERENCE BOOK IS DESIGNED TO SOLVE SPECIFIC PROCESS FLOW PROBLEMS AND AS A REVIEW OF FLUID DYNAMICS. IT COMBINES CALCULATION METHODS, DESIGN PRACTICES, AND APPLICATION WITH BASIC THEOREMS AND DEFINITIONS. THE BOOK IS DIVIDED INTO TWO SECTIONS. THE FIRST IS DEVOTED TO A THOROUGH REVIEW OF THE BASIC PRINCIPLES OF FLUID MECHANICS. THE SECOND PART APPLIES THESE PRINCIPLES TO SPECIFIC PROBLEM-SOLVING SITUATIONS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW006956

PUBLICATION DATE: AUG 78

TITLE: DETERMINATION OF RESIDUAL CHLORINE AND TURBIDITY IN DRINKING WATER: STUDENT MANUAL.

PERSONAL AUTHOR: PFAFF, JACK

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHLORINE; *DRINKING WATER; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; SAMPLING; STUDY GUIDES; TESTING; *TURBIDITY; *WATER QUALITY

DESCRIPTIVE NOTE: 56P. PB81-226938

ABSTRACT: THIS CLASSROOM/LABORATORY MANUAL IS FOR USE BY OPERATORS OF DRINKING WATER PLANTS WHO MUST ANALYZE SAMPLES FOR RESIDUAL CHLORINE AND TURBIDITY. IT CONTAINS BACKGROUND INFORMATION ON BOTH TESTS; E.G., FEDERAL REQUIREMENTS FOR COMPLIANCE ON RESIDUAL CHLORINE AND TURBIDITY, PRINCIPLES INVOLVED IN THE TESTS, AND FACTORS AFFECTING TEST RESULTS. IT ALSO CONTAINS LABORATORY PROCEDURES FOR CONDUCTING THE TWO TESTS. REAGENT PREPARATION AND INSTRUMENT CARE ARE INCLUDED. MISCELLANEOUS OTHER ITEMS ARE IN THE MANUAL: AN AGENDA, IF THE MANUAL IS TO BE USED IN THE PRESENTATION OF A TRAINING COURSE, A PRE- AND POST-COURSE TEST, AND A COPY OF THE FEDERAL REGISTER WHICH RELATES TO THE MEASUREMENT OF RESIDUAL CHLORINE AND TURBIDITY. FOR THOSE WHO DESIRE TO PRESENT INSTRUCTION IN THESE TWO DETERMINATIONS, THERE IS AN ASSOCIATED INSTRUCTOR'S MANUAL PB81-226946, TITLED AS ABOVE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006957

PUBLICATION DATE: JUL 81

TITLE: DETECTION OF OIL IN WATER BY A FLAME EMISSION TECHNIQUE.

PERSONAL AUTHOR: PRAGAR, MANFRED, STAINKEN, D.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *FLAME EMISSION TECHNIQUE; *INSTRUMENTATION; *LABORATORY TECHNIQUES; MEASUREMENT; *OIL; *OIL DETECTION; *PETROLEUM; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 52P. PB81-226185

ABSTRACT: A FLAME EMISSION TECHNIQUE AND BASIC INSTRUMENT DESIGN IS PRESENTED FOR MEASURING LOW CONCENTRATIONS OF OIL IN OIL-CONTAMINATED WATER. THE FLAME EMISSION INSTRUMENT DEVELOPED IN THIS REPORT WOULD BE USEFUL AS A DETECTOR FOR PETROLEUM OILS. INTERFERENCE OF METAL IONS IS AVOIDED BY EMPLOYING STEAM DISTILLATION AND CONDENSATION TECHNIQUES TO VAPORIZE OIL FROM SAMPLE SOLUTIONS. THE PROTOTYPE INSTRUMENT SUCCESSFULLY DETECTED OIL CONCENTRATIONS DOWN TO 10 PPM FOR OILS WITH VAPOR PRESSURE EQUAL TO OR HIGHER THAN NO. 4 FUEL OILS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006959

TITLE: FOUR MINUTES TO SURVIVAL.

DESCRIPTOR: *AUDIOVISUAL AIDS; *FILMS; *INSTRUCTIONAL MATERIALS; JOB SKILLS; *OCCUPATIONAL SAFETY; *SAFETY; SAFETY EDUCATION; SEWER SYSTEMS; *UTILITIES

DESCRIPTIVE NOTE: PURCHASE PRICE: $270.00 PLUS SHIPPING; RENTAL PRICE: $75.00 PLUS SHIPPING; FILM SYNOPSIS - RUNNING TIME: 13 1/2 MINUTES.

ABSTRACT: THIS 16-MM COLOR FILM COVERS VARIOUS ASPECTS OF JOB SAFETY THROUGH STAGED ACCIDENT SITUATIONS. THIS IS A HIGHLY MOTIVATIONAL FILM THAT EMPHASIZES WHY SAFETY RULES AND REGULATIONS MUST BE ENFORCED.

AVAILABILITY: LINDY PRODUCTIONS, INC., 4784 NORTH HIGH STREET, COLUMBUS, OH 43214

IRIS ACCESSION NUMBER: EW006960

PUBLICATION DATE: AUG 81

TITLE: SOLID WASTE DATA - A COMPILATION OF STATISTICS ON SOLID WASTE MANAGEMENT WITHIN THE UNITED STATES.

DESCRIPTOR: *DATA COLLECTION; EMPLOYMENT; *HAZARDOUS WASTES; *INFORMATION SOURCES; *MANAGEMENT; *RESEARCH REPORTS; SLUDGE; *SOLID WASTES; *STATISTICS; *SURVEYS; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 73P.

ABSTRACT: THIS REPORT REPRESENTS A COMPREHENSIVE COMPILATION OF THE MOST CURRENT (1981) AVAILABLE INFORMATION ON SOLID WASTE MANAGEMENT IN THE UNITED STATES. THIS INFORMATION IS PRESENTED IN TABULAR FORM AND ORGANIZED BY GENERAL CATAGORIES FOR EASE OF REFERENCE. THE CATAGORIES ARE: GENERATION, EMPLOYMENT, COMPOSITION, COLLECTION, TRANSPORTATION, PROCESSING, DISPOSAL, RURAL WASTE, RESOURCE RECOVERY, MUNICIPAL SLUDGE, HAZARDOUS WASTE, AND MISCELLANEOUS INFORMATION.

AVAILABILITY: JRB ASSOCIATES, 8400 WESTPARK DRIVE, MCLEAN, VA 22102

IRIS ACCESSION NUMBER: EW006961

TITLE: POTABLE WATER FROM WASTEWATER.

PERSONAL AUTHOR: GILLIES, M. T.

DESCRIPTOR: AQUIFERS; CASE STUDIES; CONTAMINANTS; GROUNDWATER; HEALTH EFFECTS; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *POTABLE WATER; PURIFICATION; RECYCLING; *TECHNOLOGICAL ADVANCEMENTS; TESTING; *WASTEWATER TREATMENT; *WATER QUALITY; *WATER REUSE

DESCRIPTIVE NOTE: 304P. PRICE: $42.00

ABSTRACT: THIS TEXT DESCRIBES SIGNIFICANT ADVANCES IN WASTEWATER TREATMENT TECHNOLOGY WHICH HAVE MADE POTABLE WATER FROM WASTEWATER TECHNICALLY FEASIBLE. CHAPTERS COVER INDIRECT POTABLE USES OF WASTEWATER, INCLUDING DISCHARGE INTO UNDERGROUND SYSTEMS, GROUNDWATER RECHARGE, AQUIFER RECHARGE, AND SHALLOW WELL AND BASIN RECHARGE; SMALL-SCALE PURIFICATION SYSTEMS; INTERNATIONAL DEVELOPMENTS IN WATER REUSE; CASE STUDIES; TREATMENT TECHNIQUES FOR WASTEWATER SCHEDULED FOR REUSE; CONTAMINANTS ASSOCIATED WITH REUSE OF MUNICIPAL WASTEWATER; TESTING METHODS; AND, HEALTH EFFECTS OF WASTEWATER REUSE.

AVAILABILITY: NOYES DATA CORP., MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW006992

PUBLICATION DATE: SEP 80

TITLE: TELECOMMUNICATIONS: A PRISM OF ACCESS FOR ADULT LEARNING.

PERSONAL AUTHOR: LUSKIN, BERNARD J.

DESCRIPTOR: *ADULT EDUCATION; *AUDIOVISUAL AIDS; *AUDIOVISUAL INSTRUCTION; *EDUCATIONAL MEDIA; EDUCATIONAL TECHNOLOGY; *INSTRUCTION; *POST SECONDARY EDUCATION; *STATE-OF-THE-ART REVIEWS; *TELECOMMUNICATIONS; *TELEVISION; *VIDEO TAPE

DESCRIPTIVE NOTE: 43-50P.

ABSTRACT: THIS ARTICLE EXAMINES THE STATE-OF-THE-ART OF TELECOMMUNICATIONS WITH IMPLICATIONS FOR THE FUTURE OF ADULT LEARNING. CONSIDERED IN THIS ARTICLE ARE BROADCAST TELEVISION, CABLE TV, INSTRUCTIONAL TV (FIXED SERVICE, ITFS, AND POINT-TO-POINT MICROWAVE), VIDEODISC AND CASSETTE, DATA/COMPUTER NETWORKS, SATELLITE, RADIO, AND THE VARIOUS SUBGROUPS UNDER EACH OF THESE TECHNOLOGIES.

AVAILABILITY: T.H.E. JOURNAL, V7 N5

IRIS ACCESSION NUMBER: EW007022

PUBLICATION DATE: JAN 78

TITLE: THE TRANSFER OF ENVIRONMENTAL INFORMATION VIA THE COOPERATIVE EXTENSION SERVICE.

PERSONAL AUTHOR: FITE, ROBERT; AND OTHERS

DESCRIPTOR: *COOPERATIVE EXTENSION SERVICE; *ENVIRONMENTAL EDUCATION; *INFORMATION DISSEMINATION; INFORMATION NETWORKS; *INFORMATION SYSTEMS; MANAGEMENT; *POLLUTION CONTROL; *PROGRAM DESCRIPTIONS; *RESEARCH REPORTS; WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 70P.

ABSTRACT: THIS RESEARCH REPORT COVERS WORK DONE ON THE DEVELOPMENT OF AN ENVIRONMENTAL INFORMATION TRANSFER SYSTEM. THE SYSTEM USED THE DELIVERY CAPABILITIES OF THE COOPERATIVE EXTENSION SERVICE. INFORMATION WAS DISSEMINATED VIA A SLIDE TAPE PROGRAM WITH ACCOMPANYING PRINTED MATERIAL. PRESENTED IN THIS REPORT ARE SPECIFIC DETAILS ON THE OPERATION OF THE SYSTEM, DISCUSSION OF THE INFORMATION PACKAGES, AND AN EVALUATION OF THE PROJECT.

AVAILABILITY: ENVIRONMENTAL EXTENSION PROJECT, OKLAHOMA STATE UNIVERSITY, STILLWATER, OKLAHOMA 74074

IRIS ACCESSION NUMBER: EW007024

TITLE: CONSERVATION DOWN ON THE FARM.

DESCRIPTOR: *AGRICULTURAL PRODUCTION; *AGRICULTURAL WASTES; *AGRICULTURE; *AUDIOVISUAL AIDS; *CONSERVATION; *EROSION CONTROL; FARM MANAGEMENT; *FILMS; *INSTRUCTIONAL MATERIALS; *LAND MANAGEMENT; *POST SECONDARY EDUCATION; *SOIL EROSION; *WATER QUALITY

DESCRIPTIVE NOTE: 20 MINUTE COLOR MOTION PICTURE. PURCHASE PRICE $350.00; RENTAL PRICE $35.00

ABSTRACT: "CONSERVATION DOWN ON THE FARM" IS A 20 MINUTE COLOR MOTION PICTURE WHICH SHOWS HOW CONSERVATION PLANNING CAN PREVENT SOIL EROSION, IMPROVE WATER QUALITY AND ENHANCE AGRICULTURAL PRODUCTION. EVERY YEAR IN THE UNITED STATES, RAIN AND MELTED SNOW WASHES NEARLY 2 BILLION TONS OF PRODUCTIVE TOPSOIL OFF UNPROTECTED CROPLAND. MUCH OF THE NATION HAS ALREADY LOST HALF ITS TOPSOIL IN ITS FIRST TWO HUNDRED YEARS. IF THIS TREND CONTINUES, EROSION IN THE NEXT 50 YEARS COULD REDUCE CROP YIELDS IN MANY PARTS OF THE COUNTRY BY 20 PERCENT OR MORE. REVERSING THIS TREND IS POSSIBLE, ACCORDING TO THE FILM, THROUGH A COORDINATED EFFORT BY THE LANDOWNER, THE LOCAL SOIL AND WATER CONSERVATION DISTRICT AND COOPERATING AGENCIES SUCH AS THE SOIL CONSERVATION SERVICE OF THE U. S. DEPARTMENT OF AGRICULTURE. THE FILM FOCUSES ON A DAIRY FARMER IN CECIL COUNTY, MARYLAND, AND THE HELP HE RECEIVED FROM THE CECIL COUNTY SOIL CONSERVATION DISTRICT. TECHNICAL EXPERTS IN SOIL CONSERVATION, ENGINEERING AND FORESTRY HELPED THE FARMER IDENTIFY AND ANALYZE EROSION, DRAINAGE AND ANIMAL WASTE PROBLEMS ON HIS 800 ACRE FARM. TAKING HIS PRODUCTION GOALS AND METHOD OF OPERATION INTO ACCOUNT, THEY THEN HELPED HIM DESIGN A COORDINATED SET OF BEST MANAGEMENT PRACTICES TO SOLVE THOSE PROBLEMS. A COMBINATION OF DIVERSION TERRACES, NO-TILL CROPPING, GRASS WATERWAYS AND CONTOUR STRIPCROPPING REDUCED EROSION TO ABOUT HALF THE RATE CONSIDERED "TOLERABLE". AN ANIMAL WASTE MANAGEMENT FACILITY KEPT MANURE AND DAIRY PARLOR WASTES FROM POLLUTING A NEARBY STREAM. THE FACILITY ALSO SAVES LABOR AND FUEL. ALTHOUGH THE SETTING FOR THE FILM IS IN MARYLAND, THE PRINCIPLES AND PRACTICES SHOWN APPLY NATIONWIDE. THERE ARE 3,000 CONSERVATION DISTRICTS IN THE UNITED STATES. EACH PROVIDES FREE TECHNICAL HELP TO LANDOWNERS IN DESIGNING CONSERVATION PRACTICES AND OFTEN CAN HELP ARRANGE COST SHARING ASSISTANCE.

AVAILABILITY: STUART FINLEY, INC., 3428 MANSFIELD ROAD, FALLS CHURCH, VA 22041

IRIS ACCESSION NUMBER: EW007025

TITLE: HAZARDOUS WASTE OPTIONS.

DESCRIPTOR: *AUDIOVISUAL AIDS; FACILITIES; *FILMS; *HAZARDOUS WASTES; *INCINERATION; *INDUSTRY; *INSTRUCTIONAL MATERIALS; LAND TREATMENT; *MANAGEMENT; *POST SECONDARY EDUCATION; *RECYCLING; *TRAINING; *WASTE TREATMENT; *WASTE DISPOSAL; *WASTES

DESCRIPTIVE NOTE: 16MM COLOR SOUND MOTION PICTURE. PURCHASE PRICE: $400.00; RENTAL PRICE: $40.00

ABSTRACT: DOCUMENTED IN THIS 16MM COLOR SOUND MOTION PICTURE ARE HAZARDOUS WASTE MANAGEMENT OPERATIONS. EMPHASIS IS PLACED ON INDUSTRIAL CHEMICALS AND NOT ON RADIOACTIVE WASTES. THE FILM WAS MADE AT THE FACILITIES OF NINE MAJOR HAZARDOUS WASTE SERVICE COMPANIES AND INCLUDES SUCH PROCESSES AS RECYCLING, WASTE TREATMENT, LANDFILLING, INCINERATION, DEEP-WELL INJECTION AND LAND TREATMENT. ALSO COVERED ARE OPERATIONAL PROCEDURES, HAZARDOUS WASTE REPORTING SYSTEMS, AND OPTIONS AVAILABLE TO HAZARDOUS WASTE MANAGERS IN INDUSTRY.

AVAILABILITY: STUART FINLEY, INC., 3428 MANSFIELD ROAD, FALLS CHURCH, VA 22041

IRIS ACCESSION NUMBER: EW007028

PUBLICATION DATE: MAR 81

TITLE: WITHOUT WATER.

DESCRIPTOR: *AUDIOVISUAL AIDS; *DROUGHT; *FILMS; *WATER SUPPLY; *WATER RESOURCES; *WATER USE

DESCRIPTIVE NOTE: 16-MM FILM, COLOR, 5 1/2 MINUTES.

ABSTRACT: THIS SHORT FILM DRAMATIZES EVERYDAY LIFE WITHOUT WATER. BY FOCUSING ON A TYPICAL HOME SETTING, CONNECTIONS ARE MADE BETWEEN WATER AND OBJECTS SUCH AS ORANGE JUICE, MEAT, MAGAZINES, GASOLINE, AND CLOTHES AND THE AMOUNT OF WATER USED FOR EACH.

AVAILABILITY: AWWA TECHNICAL LIBRARY, 6666 W. QUINCY AVE., DENVER, CO 80235

IRIS ACCESSION NUMBER: EW007048

PUBLICATION DATE: 77

TITLE: PUBLIC INFORMATION HANDBOOK.

DESCRIPTOR: *COMMUNICATIONS; *EDUCATIONAL PROGRAMS; GUIDELINES; HANDBOOKS; *INDUSTRIES; INSTRUCTION; *INSTRUCTIONAL MEDIA; NEWS REPORTING; *POLLUTION CONTROL; *PUBLIC RELATIONS; *WATER POLLUTION

DESCRIPTIVE NOTE: 40P. PRICE: $8.00

ABSTRACT: THIS HANDBOOK IS DESIGNED TO HELP WATER POLLUTION CONTROL ORGANIZATIONS COMMUNICATE THE OBJECTIVES, PROBLEMS, AND SOLUTIONS OF THE WATER POLLUTION CONTROL INDUSTRY. THIS REVISED EDITION INCORPORATES THE LATEST METHODS OF TEACHING BASIC PUBLIC INFORMATION TECHNIQUES TO NON-PROFESSIONALS. TOPICS DISCUSSED INCLUDE: NEWSWRITING, NEWS MEDIA, SPEECHWRITING AND PUBLIC SPEAKING, PUBLIC RELATIONS, AND THE DEVELOPMENT OF AN OFFICE OF INFORMATION SERVICES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW007067

PUBLICATION DATE: NOV 81

TITLE: A CRITICAL REVIEW OF WATER QUALITY MODELING FOR WASTE LOAD ALLOCATION.

PERSONAL AUTHOR: ZIGLER, FRED G.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; DATA ANALYSIS; DESIGN; *EFFLUENTS; *MATHEMATICAL MODELING; *MODELING; *STANDARDS; *WASTE LOAD ALLOCATION; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 5-11P.

ABSTRACT: THIS ARTICLE REVIEWS THE REQUIREMENTS FOR A PROPERLY DEVELOPED MATHEMATICAL MODEL FOR DETERMINING WASTE LOAD ALLOCATIONS FOR WATER SYSTEMS. THE ARTICLE DESCRIBES AND GIVES EXAMPLES OF THE FOLLOWING 8 STEPS IN BASIC MODELING: DEFINE WATER QUALITY PROBLEM; SELECT METHODS OF ANALYSIS; EVALUATE EXISTING DATA; PERFORM PRELIMINARY MODELING; CALIBRATION AND VERIFICATION; CONDUCT SENSITIVITY ANALYSIS; APPLY MODEL TO DETERMINE ALLOWABLE WASTE LOAD; AND, MONITOR WATER QUALITY AND REFINE MODEL.

AVAILABILITY: ENVIRONMENTAL REGULATION ANALYST, V2 N12

IRIS ACCESSION NUMBER: EW007080

PUBLICATION DATE: OCT 81

TITLE: ALTERNATIVE WASTE TREATMENT SYSTEMS FOR RURAL LAKE PROJECTS.

DESCRIPTOR: *ALTERNATIVE SYSTEMS; AQUATIC ENVIRONMENTS; *CLEAN WATER ACT; *COSTS; *ECONOMIC FACTORS; *ENVIRONMENTAL IMPACT STATEMENTS; EVALUATION; FACILITIES; *LAKES; *MANAGEMENT; PLANNING; *RURAL AREAS; SOCIAL FACTORS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 180P.

ABSTRACT: THIS EIS EXAMINES THE ENVIRONMENTAL, ECONOMIC AND SOCIAL COSTS WITHIN REGION V OF RURAL LAKE WASTEWATER PLANNING ESPECIALLY AS FUNDED AND MANAGED UNDER THE CLEAN WATER ACT. IT REVIEWS AND ANALYZES FACILITIES PLANNING AND ENVIRONMENTAL REVIEW METHODS FOR RURAL LAKE AREAS. IT USES SEVEN SAMPLE PROJECTS OF THIS TYPE TO PRESENT SPECIFIC RECOMMENDATIONS ABOUT DEVELOPMENT AND MANAGEMENT OF DECENTRALIZED SMALL-FLOW ALTERNATIVES TO CONVENTIONAL WASTEWATER TREATMENT. IT RECOMMENDS SPECIFIC METHODS TO DOCUMENT PROJECT NEED AND WATER QUALITY IMPACT. IT CONCLUDES THAT WHEREVER FEASIBLE, A WASTEWATER MANAGEMENT PROGRAM BASED ON OPTIMUM OPERATION OF EXISTING SYSTEMS WILL RESULT IN SUBSTANTIAL SAVINGS IN CAPITAL AND PRESENT WORTH COSTS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007081

PUBLICATION DATE: MAY 81

TITLE: CONSTRUCTION GRANTS PROCESS FOR AGENCY PERSONNEL - VIDEOTAPE INSTRUCTOR MANUAL.

DESCRIPTOR: *AUDIOVISUAL AIDS; *CONSTRUCTION GRANTS; DESIGN; FACILITIES; FEDERAL ROLE; *INSTRUCTIONAL MATERIALS; *INSTRUCTION; *PLANNING; *POST SECONDARY EDUCATION; PROJECT PLANNING; REGULATIONS; STATE AGENCIES; *STUDY GUIDES; *TEACHING GUIDES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 185P. PRICE: $1.00 PLUS $.03 PER PAGE.

ABSTRACT: THIS INSTRUCTOR MANUAL HAS BEEN PREPARED TO AID INSTRUCTORS IN THE PLANNING AND DELIVERY OF TRAINING FOR THE ADMINISTRATION OF THE CONSTRUCTION GRANTS PROGRAM USING PREPARED VIDEOTAPES. THE COURSE IS DESIGNED AS AN INTRODUCTION TO THE CONSTRUCTION GRANTS PROCESS AND IS GEARED TOWARD NEW STATE AGENCY PERSONNEL. SECTIONS IN THIS MANUAL COVER COURSE PLANNING, COURSE DELIVERY, AND LESSON PLANS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007082

PUBLICATION DATE: MAY 81

TITLE: CONSTRUCTION GRANTS PROCESS FOR STATE AGENCY PERSONNEL - STUDENT MANUAL.

DESCRIPTOR: *ADMINISTRATION; *CONSTRUCTION GRANTS; DESIGN; FACILITIES; FEDERAL ROLE; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *POST SECONDARY EDUCATION; *PROJECT PLANNING; REGULATIONS; *STATE AGENCIES; *STUDY GUIDES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 131P. PRICE: $1.00 PLUS $.03 PER PAGE.

ABSTRACT: THIS STUDENT MANUAL HAS BEEN PREPARED TO AID STUDENTS IN UNDERSTANDING THE CONSTRUCTION GRANTS PROCESS. THE COURSE IS DESIGNED AS AN INTRODUCTION TO THE CONSTRUCTION GRANTS PROGRAM AND IS GEARED TOWARD NEW STATE AGENCY PERSONNEL. THE SUBJECT OF THE COURSE IS THE MANAGEMENT AND ADMINISTRATION BY STATE AGENCIES OF THE PROGRAM. IT ALSO ADDRESSES TECHNICAL ISSUES TO BE CONSIDERED IN THE PLANNING AND DESIGN OF TREATMENT FACILITIES.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007128

PUBLICATION DATE: NOV 81

TITLE: OPERATORS SPEAK OUT ABOUT TRAINING.

PERSONAL AUTHOR: ALLOWAY, RAWLE; BOE, OWEN

DESCRIPTOR: *EDUCATIONAL NEEDS; *EDUCATIONAL PROGRAMS; *NEEDS ASSESSMENT; OPERATORS; *OPERATOR TRAINING; *PROGRAM DESCRIPTIONS; SURVEYS; *TRAINING PROGRAMS; *TRAINING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 30-32P.

ABSTRACT: THIS ARTICLE EXAMINES A PROJECT DESIGNED TO ASSESS TRAINING NEEDS AND DEVELOP AN EFFECTIVE OPERATOR EDUCATION ORGANIZATION THROUGH SURVEYING OPERATORS. 63 WASTEWATER TREATMENT PERSONNEL IDENTIFIED WHAT THEY PERCEIVED AS THEIR OWN TRAINING NEEDS AND A TRAINING PROGRAM WAS THEN DEVELOPED AROUND THE CONCEPT OF A REGIONAL COORDINATOR OF TRAINING SERVICES. THE SURVEY RESULTS AND THE TRAINING PROGRAM ARE DISCUSSED IN DETAIL.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT, V128 N11

IRIS ACCESSION NUMBER: EW007129

PUBLICATION DATE: NOV 81

TITLE: FIXING FAULTY O 8 M TRAINING PROGRAMS.

PERSONAL AUTHOR: WESTON, THOMAS, SR.; KELLOGG, STEPHEN R.

DESCRIPTOR: *EDUCATIONAL NEEDS; *INSTRUCTION; *MAINTENANCE; NEEDS ASSESSMENT; OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *RECOMMENDATIONS; *TRAINING PROGRAMS; *TRAINING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 33-40P.

ABSTRACT: THIS ARTICLE DISCUSSES VARIOUS METHODS FOR IMPROVING OPERATIONS AND MAINTENANCE TRAINING PROGRAMS. THE ARTICLE FOCUSES RECOMMENDATIONS ON THE FOLLOWING FOUR RECURRING DEFICIENCIES FOUND IN MANY OPERATOR TRAINING PROGRAMS: (1) INEXPERIENCED INSTRUCTORS; (2) LACK OF TRAINING AT APPROPRIATE LEVEL; (3) LACK OF COMMUNICATION BETWEEN INSTRUCTORS AND CLASS; AND (4) POOR TIMING OF TRAINING PROGRAMS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT, V128 N11

IRIS ACCESSION NUMBER: EW007130

PUBLICATION DATE: NOV 81

TITLE: WASTEWATER PLANT STAFF LIKE CHLORINE SYSTEM.

DESCRIPTOR: *CASE STUDIES; *CHLORINATION; *DESIGN; *DISINFECTION; EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 46P.

ABSTRACT: THIS ARTICLE EXAMINES A CHLORINE DISINFECTION SYSTEM OF A NEW JERSEY WASTEWATER TREATMENT PLANT. CHLORINE IS PROVIDED BY AN ONSITE ELECTROLYTIC CHLORINATION (OSEC) SYSTEM. THIS SYSTEM AND OTHER FEATURES OF THE PLANT'S DESIGN HAVE RECEIVED PRAISE FROM THE OPERATING STAFF.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT, V128 N11

IRIS ACCESSION NUMBER: EW007131

PUBLICATION DATE: NOV 81

TITLE: MAKING SUPERVISORY MANAGEMENT TRAINING PAY OFF.

PERSONAL AUTHOR: VAN DAM, DORIS

DESCRIPTOR: ADMINISTRATION; *COMMUNICATIONS; *EMPLOYEE RELATIONS; *MANAGEMENT; *SUPERVISION; *TRAINING

DESCRIPTIVE NOTE: 52-55P.

ABSTRACT: THIS ARTICLE DISCUSSES VARIOUS TECHNIQUES FOR MANAGING A FACILITY STAFF. SEVERAL FACTORS IN SUPERVISORY MANAGEMENT ARE EXAMINED. THESE INCLUDE: COMMUNICATIONS, ACHIEVEMENT OF GOALS, WORK MOTIVES, INTERPERSONAL RELATIONSHIPS, THE CONCEPTS OF DIRECTING AND CONTROLLING, PERFORMANCE STANDARDS, CONTROL DEVICES, AND ORGANIZATIONAL SYSTEMS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT, V128 N11

IRIS ACCESSION NUMBER: EW007132

PUBLICATION DATE: NOV 81

TITLE: WASTEWATER TREATMENT PLANT FEATURES NEW TECHNOLOGY.

PERSONAL AUTHOR: ALEXANDER, M. L.

DESCRIPTOR: *DESIGN; EQUIPMENT; *FACILITIES; *MICHIGAN; MUNICIPALITIES; *OPERATIONS (WASTEWATER); *SEWAGE TREATMENT; *SLUDGE; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 50-52P.

ABSTRACT: THIS ARTICLE DISCUSSES A NEW MUNICIPAL SEWAGE TREATMENT PLANT IN BANGOR TOWNSHIP, MICHIGAN WHICH FEATURES ADVANCED SLUDGE HANDLING, DRYING AND DISPOSAL TECHNIQUES. INCLUDED ARE PROCESS DESCRIPTIONS, OPERATIONAL ASPECTS, AND A DISCUSSION ON SLUDGE CONDITIONG, AND SITE PLANS AND FLOW SCEMATICS.

AVAILABILITY: PUBLIC WORKS, V112 N11

IRIS ACCESSION NUMBER: EW007133

PUBLICATION DATE: NOV 81

TITLE: PINPOINTING SOURCES OF MASSIVE INFILTRATION/INFLOW.

DESCRIPTOR: *CASE STUDIES; *INFILTRATION; *INFLOW; *INSPECTION; *MISSOURI; *PIPES; *SEWER SYSTEMS; *TELEVISION; VIDEO TAPES; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 66-67P.

ABSTRACT: THIS ARTICLE DISCUSSES THE USE OF TELEVISION INSPECTION FOR INFILTRATION/INFLOW PROBLEMS IN SANITARY SEWER SYSTEMS. THIS CASE STUDY OF THE JOPLIN, MISSOURI SANITARY SEWER SYSTEM EXAMINES CONDITIONS PRIOR TO INSPECTION, WORK PROCEDURES, AND FINAL ANALYSIS OF DATA.

AVAILABILITY: PUBLIC WORKS, V112 N11

IRIS ACCESSION NUMBER: EW007134

PUBLICATION DATE: NOV 81

TITLE: HOW DO YOU BUILD WHEN SEWERS ARE INADEQUATE?

PERSONAL AUTHOR: STEGMANN, NORMAN K.

DESCRIPTOR: *CASE STUDIES; *FACILITIES; *INFILTRATION; *INFLOW; *INSPECTION; *MANAGEMENT; MUNICIPALITIES; *NEW JERSEY; *PLANNING; REGULATIONS; *REHABILITATION; *SEWER BANS; *SEWER SYSTEMS; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 74-75P.

ABSTRACT: THIS ARTICLE DISCUSSES ALTERNATIVES TO A SEWER BAN WHICH INCLUDES REHABILITATION OF EXISTING SYSTEMS AND STUDIES TO DETECT INFILTRATION/INFLOW PROBLEMS. ATTENTION IS FOCUSED ON A CASE STUDY IN WAYNE, NEW JERSEY.

AVAILABILITY: PUBLIC WORKS, V112 N11

IRIS ACCESSION NUMBER: EW007135

PUBLICATION DATE: NOV 81

TITLE: RECOMMENDATIONS FOR REGULATORY MODIFICATIONS: THE USE OF WASTE STABILIZATION POND SYSTEMS.

PERSONAL AUTHOR: GLOYNA, EARNEST F.; TISCHLER, LIAL F.

DESCRIPTOR: ACTIVATED SLUDGE; *ALGAE; *PERFORMANCE EVALUATION; *PONDS; *RECOMMENDATIONS; *REGULATIONS; *STABILIZATION PONDS; SUSPENDED SOLIDS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 1559-1563P.

ABSTRACT: THIS DOCUMENT WAS PREPARED TO DEVELOP A POSITION ON THE REGULATION OF WASTE STABILIZATION POND SYSTEMS, INCLUDING LIMITATIONS ON TOTAL SUSPENDED SOLIDS. THE DATA BASE FOR THE POSITION INCLUDED: EVALUATION OF EXISTING WASTE STABILIZATION POND SYSTEMS; COMPARISON OF WASTE STABILIZATION SYSTEMS WITH EXEMPLARY ACTIVATED SLUDGE SYSTEMS; AND STUDIES OF ALGAL METABOLISM AS IT MAY RELATE TO RECEIVING WATERS. THE STUDY SUPPORTS THE POSITION THAT GENERALLY ALGAL CELLS SHOULD BE EXCLUDED FROM THE TOTAL SUSPENDED SOLIDS LIMITATIONS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N11

IRIS ACCESSION NUMBER: EW007136

PUBLICATION DATE: NOV 81

TITLE: PROJECT OUTCOMES CORRELATE WITH PUBLIC PARTICIPATION VARIABLES.

PERSONAL AUTHOR: ELLIS, RICHARD A.; DISINGER, JOHN F.

DESCRIPTOR: *MANAGEMENT; *PERFORMANCE EVALUATION; PLANNING; *PROJECT PLANNING; *PUBLIC PARTICIPATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1564-1567P.

ABSTRACT: THIS ARTICLE REPORTS ON A STUDY WHICH WAS UNDERTAKEN TO ANALYZE PUBLIC PARTICIPATION VARIABLES -- SUCH AS METHODS OF INVOLVING THE PUBLIC AND SOCIAL FACTORS SURROUNDING PROJECT PLANNING -- FOR THEIR RELATIONSHIP TO PROJECT OUTCOME VARIABLES. A CORRELATION TABLE IS PROVIDED FOR 11 DEPENDENT VARIABLES AND 52 INDEPENDENT VARIABLES TO ILLUSTRATE THE RELATIONSHIPS ENCOUNTERED IN THE CASE STUDIES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N11

IRIS ACCESSION NUMBER: EW007137

PUBLICATION DATE: NOV 81

TITLE: PROCEDURES FOR ESTIMATING DRY WEATHER POLLUTANT DEPOSITION IN SEWER SYSTEMS.

PERSONAL AUTHOR: PISANO, WILLIAM C.; AND OTHERS

DESCRIPTOR: *COLLECTION SYSTEMS; *MATHEMATICAL MODELS; METHODOLOGY; MODELING; *PIPES; RESEARCH REPORTS; *SEWER SYSTEMS; *SOLIDS; WASTEWATER

DESCRIPTIVE NOTE: 1627-1636P.

ABSTRACT: A SIMPLIFIED METHODOLOGY WAS PREPARED FOR PROVIDING FIRST-CUT ASSESSMENTS OF THE TOTAL AMOUNTS OF SOLIDS THAT DEPOSIT IN A SEWER COLLECTION SYSTEM, AND THE EXTENT TO WHICH THE DEPOSITION TAKES PLACE. EXTENSIVE STATISTICAL ANALYSES OF SEWER SYSTEM PIPE SLOPES REVEALED THAT COLLECTION SYSTEM PIPE SLOPES MAY BE REPRESENTED BY AN EXPONENTIAL PROBABILITY MODEL. ANALYSIS OF THE DISTRIBUTION OF LOADS DEPOSITED VERSUS CUMULATIVE PIPE LENGTH LED TO THE DEVELOPMENT OF GENERALIZED CURVES AS A FUNCTION OF COLLECTION SYSTEM MEAN SLOPE FOR ESTIMATING THE TOTAL FRACTION OF COLLECTION SYSTEM PIPE FOOTAGE OVER WHICH A GIVEN PERCENTAGE OF THE TOTAL LOADS DEPOSIT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N11

IRIS ACCESSION NUMBER: EW007138

PUBLICATION DATE: NOV 81

TITLE: OBTAINING HIGH-LEVEL WASTEWATER DISINFECTION WITH OZONE.

PERSONAL AUTHOR: STOVER, ENOS L.; JARNIS, ROBERT W.

DESCRIPTOR: BACTERIA; *CASE STUDIES; *DISINFECTION; *OZONATION; *OZONE; *PILOT PLANTS; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 1637-1647P.

ABSTRACT: RECENTLY, SOME STATES (FOR EXAMPLE, MARYLAND AND CALIFORNIA) HAVE ADOPTED MORE STRINGENT DISINFECTION REQUIREMENTS THAN 70 MPN PER 100 ML FOR MEAN EFFLUENT TOTAL COLIFORM LEVELS, AS DEFINED BY THE 1964 NATIONAL SHELLFISH SANITATION WORKSHOP FOR BACTERIOLOGICAL WATER QUALITY FOR APPROVED SHELLFISH AREAS. THE FEASIBILITY OF OZONE TO DISINFECT TO HIGH LEVELS (2.2 AND 70 TOTAL COLIFORMS PER 100 ML) WAS INVESTIGATED IN A 0.26-M3/MIN (98-GAL/DAY) PILOT PLANT UTILIZING FULLSCALE OZONE SYTEM ON FILTER SECONDARY AND NITRIFIED DOMESTIC WASTEWATER AT MALBOROUGH, MASS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N11

IRIS ACCESSION NUMBER: EW007139

PUBLICATION DATE: NOV 81

TITLE: DISCUSSION OF: PERFORMANCE OF ACTIVATED SLUDGE PROCESSES AND RELIABILITY-BASED DESIGN.

PERSONAL AUTHOR: AVENDT, RAYMOND J.

DESCRIPTOR: *ACTIVATED SLUDGE; *DESIGN; *EVALUATION; MATHEMATICAL APPLICATIONS; *MODELING; *OPERATIONS (WASTEWATER); *PERFORMANCE; SLUDGE; STATISTICS; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1658-1659P.

ABSTRACT: THE PURPOSE OF THIS ARTICLE IS TO PRESENT THE RESULTS OF A STUDY OF STATISTICAL MODELING OF TREATMENT PLANT DATA TO DETERMINE THE EFFECTS OF DESIGN AND OPERATING PARAMETERS ON THE PERFORMANCE AND RELIABILITY OF VARIOUS TREATMENT UNIT PROCESSES. THE DATA WERE TAKEN FROM 17 MAJOR TREATMENT FACILITIES OVER A 2 YEAR PERIOD.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N11

IRIS ACCESSION NUMBER: EW007140

PUBLICATION DATE: NOV 81

TITLE: OPERATION REPORTS - EAST BAY MUNICIPAL DISTRICT (SD NO.1), CALIFORNIA.

DESCRIPTOR: *CALIFORNIA; *CASE STUDIES; DESIGN; *FACILITIES; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WASTEWATER); *UTILITIES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1660-1664P.

ABSTRACT: THIS ARTICLE REPORTS ON THE OPERATIONS OF SPECIAL DISTRICT NO. 1 OF THE EAST BAY MUNICIPAL UTILITY DISTRICT, CALIFORNIA. VARIOUS FACETS OF THE DISTRICT'S OPERATIONS ARE EXAMINED INCLUDING WASTEWATER TREATMENT SECTION, MAINTENANCE SECTION, INTERCEPTOR SECTION, AND PLANT PROCESSING. A COMPLETE TABLE OF OPERATING DATA IS PROVIDED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N11

IRIS ACCESSION NUMBER: EW007175

PUBLICATION DATE: MAR 77

TITLE: PESTICIDE PROTECTION - A TRAINING MANUAL FOR HEALTH PERSONNEL.

PERSONAL AUTHOR: DAVIES, JOHN E.

DESCRIPTOR: *AUDIOVISUAL AIDS; HAZARDOUS MATERIALS; *HEALTH PERSONNEL; *INSTRUCTIONAL MATERIALS; OCCUPATIONAL HEALTH AND SAFETY; *PESTICIDES; POISONING; *POST SECONDARY EDUCATION; *PUBLIC HEALTH; *TRAINING PROGRAMS

ABSTRACT: THIS TRAINING PROGRAM PRESENTS MATERIAL ON PESTICIDE PROTECTION DESIGNED FOR HEALTH PERSONNEL. TOPICS INCLUDE: PESTICIDES; PESTICIDE HAZARDS AND HOW EXPOSURE OCCURS; SYSTEMATIC ORGANOPHOSPHATE AND CARBAMATE POISONING; MISCELLANEOUS POISONINGS; TOPICAL EFFECTS; PESTICIDE EPIDEMIOLOGY; METHODS OF PREVENTION; AND, ACUTE PESTICIDE POISONING VERIFICATION. THIS PROGRAM CONTAINS: SLIDES, CASSETTE TAPES, SCRIPT, TRAINEES MANUAL, PRE AND POST TESTS AND ANSWER SHEETS, HANDOUT MATERIALS, INSTRUCTIONS TO THE TRAINER, AND CORE MANUAL.

AVAILABILITY: OFFICE OF PESTICIDE PROGRAMS, OPERATIONS DIVISION, ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007185

PUBLICATION DATE: AUG 81

TITLE: DEVELOPMENT OF METHODOLOGY FOR DETERMINING RISK ASSESSMENT WHEN SLUDGE IS APPLIED TO LAND.

PERSONAL AUTHOR: JUTRO, PETER R.; NERODE, ANIL

DESCRIPTOR: *CADMIUM; *CONTAMINANTS; *DATA ANALYSIS; EPIDEMIOLOGY; *HEALTH EFFECTS; *LAND APPLICATION; *MANAGEMENT; METHODS; *PUBLIC HEALTH; *RISK ASSESSMENT; *SLUDGE; *TOXIC SUBSTANCES; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 193P. PB81-240012

ABSTRACT: THIS PROJECT EXPLORED THE FEASIBILITY OF DEVELOPING A RISK ASSESSMENT METHODOLOGY THAT COULD BE APPLIED TO SLUDGE MANAGEMENT DECISION MAKING. IT EXAMINED CADMIUM, SINCE THIS SUBSTANCE IS ONE OF THE BEST STUDIED AND MOST EXTENSIVELY REPORTED CONTAMINANTS. THIS REPORT ESTABLISHES THAT DATA BASES ARE REQUIRED. THE PROBLEMS ASSOCIATED WITH CATEGORIES OF DATA ARE CONSIDERED AND DISCUSSED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007186

PUBLICATION DATE: JUL 81

TITLE: COMPOSTING PROCESSES TO STABILIZE AND DISINFECT MUNICIPAL SEWAGE SLUDGE.

DESCRIPTOR: *COMPOSTING; *DESIGN; DISINFECTION; FACILITIES; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; *SEWAGE; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 55P. PB81-240509

ABSTRACT: THIS BULLETIN WAS WRITTEN TO PROVIDE GUIDANCE FOR THE DESIGN AND OPERATION OF SEWAGE SLUDGE COMPOSTING FACILITIES. IT ALSO WILL SERVE AS AN AID IN THEIR EFFECTIVE ESTABLISHMENT AND WILL HELP ALLEVIATE PROBLEMS THAT MAY ARISE DURING EVERYDAY NORMAL OPERATION. THE GUIDANCE CONSISTS PRIMARILY OF RECOMMENDED OPERATIONAL PROCEDURES AND PERFORMANCE LEVELS RELATED TO THE COMPOSTING FACILITIES. THE PERFORMANCE LEVELS, RECOMMENDED WITHIN THIS BULLETIN, ARE FLEXIBLE TO MAKE ALLOWANCES FOR INNOVATION IN COMPOSTING SYSTEM DESIGNS. THE RECOMMENDATIONS WILL ALSO ASSURE THAT ADEQUATE SLUDGE STABILIZATION AND DISINFECTION (PATHOGEN REDUCTION) ARE ACHIEVED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007187

PUBLICATION DATE: SEP 79

TITLE: LANDSAT SUPPORTS DATA NEEDS FOR EPA 208 PLANNING.

DESCRIPTOR: *DATA ACQUISITION; DATA ANALYSIS; *ENVIRONMENTAL PROTECTION AGENCY; GRANT PROGRAMS; *LANDSAT; LEGISLATION; MANAGEMENT; NONPOINT POLLUTION; *PLANNING; *POLLUTION; REGULATIONS; *REMOTE SENSING; *208 PLANNING; *WATER QUALITY

DESCRIPTIVE NOTE: 36P. E81-10148

ABSTRACT: EXCERPTS FROM FEDERAL LEGISLATION AND REGULATIONS MANDATING AREAWIDE WASTE TREATMENT MANAGEMENT AS A MEANS OF RESTORING AND MAINTAINING THE INTEGRITY OF THE NATION'S WATER ARE PRESENTED ALONG WITH REQUIREMENTS FOR GRANTS TO THE STATES FOR WATER QUALITY PLANNING, MANAGEMENT, AND IMPLEMENTATION. EXPERIENCES USING LANDSAT TO IDENTIFY NONPOINT SOURCES OF WATER POLLUTION AS WELL AS LAND/USE/LAND COVER FEATURES IN SOUTH DAKOTA, KENTUCKY, GEORGIA, NEW JERSEY, AND TEXAS ARE DESCRIBED. PRESENT ACTIVITIES SUGGEST THAT THIS TYPE OF REMOTE SENSING IS AN EFFICIENT, EFFECTIVE TOOL FOR AREAWIDE WATER QUALITY PLANNING. INTERACTION WITH COGNIZANT FEDERAL, STATE, AND LOCAL GOVERNMENT PERSONNEL INVOLVED IN EPA SECTION 208 PLANNING ACTIVITIES CAN GUIDE THE DEVELOPMENT OF NEW CAPABILITIES AND ENHANCE THEIR UTILITY AND PROSPECT FOR USE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007188

PUBLICATION DATE: JUL 81

TITLE: DEVELOPMENT OF A MANAGEMENT PROCESS FOR COMMUNITY WATER AND WASTEWATER SYSTEMS.

DESCRIPTOR: *COLORADO; CONSTRUCTION; DATA ACQUISITION; EVALUATION; *FACILITIES; MAINTENANCE; *MANAGEMENT; *MUNICIPALITIES; *NEEDS ASSESSMENT; *PLANNING; *SEWERS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT; *WATER SUPPLY; *WATER QUALITY

DESCRIPTIVE NOTE: 170P. PB81-244287

ABSTRACT: THE STATE OF COLORADO FORMED A COMMITTEE OF KEY AGENCIES' REPRESENTATIVES TO AGGREGATE GROSS DATA ON SEWER AND WATER PROBLEMS AMONG MUNICIPALITIES AND SPECIAL DISTRICTS THROUGHOUT THE STATE. THE COMMITTEE WAS FORMED AT THE REQUEST OF THE GOVERNOR FOR THE PURPOSE OF COMPILING A COMPREHENSIVE LIST OF CITIES, TOWNS AND DISTRICTS THAT ADMINISTER AND MAINTAIN WATER AND/OR SEWER SYSTEMS, AND WHICH MAY NEED TO REPAIR, REHABILITATE OR CONSTRUCT SUCH FACILITIES. THE COMMITTEE, HAS CATEGORIZED ALL LOCAL SERVICE ENTITITES ON THE BASIS OF NEEDS. THE COMMITTEE ALSO WAS FORMED IN ORDER TO DEVELOP CRITERIA AND A PROCESS FOR WATER AND SEWER NEEDS IDENTIFICATION, AND FOR CATEGORIZATION OF THESE NEEDS AS IMMEDIATE OR LONG-TERM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007190

PUBLICATION DATE: MAY 72

TITLE: WASTEWATER MANAGEMENT BY DISPOSAL ON THE LAND.

DESCRIPTOR: *ECOLOGICAL FACTORS; *EFFLUENTS; HEALTH EFFECTS; HYDROLOGY; IRRIGATION; *LAND APPLICATION; *MANAGEMENT; MICROBIOLOGY; SOIL CHEMISTRY; *WASTE DISPOSAL; *WASTEWATER; WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 183P.

ABSTRACT: THIS TECHNICAL REPORT PRESENTS AN INTEGRATED DISCUSSION OF DISPOSAL TECHNIQUES AND ECOSYSTEM RESPONSES. THREE BASIC LAND DISPOSAL TECHNIQUES ARE EXAMINED: SPRAY IRRIGATION, OVERLAND RUNOFF, AND RAPID INFILTRATION. CHAPTERS INCLUDE: SECONDARY TREATMENT PROCESSES; ROLE OF SOIL CHEMICAL PROCESSES IN RECLAMATION OF WASTEWATER APPLIED TO LAND; MICROBIOLOGICAL RESPONSES TO LAND DISPOSAL OF SECONDARY-TREATED MUNICIPAL-INDUSTRIAL WASTEWATER; BOTANICAL COMPONENTS INVOLVED IN LAND DISPOSAL OF WASTEWATER EFFLUENT; HYDROLOGICAL ASPECTS OF WASTEWATER DISPOSAL ON LAND; IMPACT OF CLIMATOLOGY AND METEOROLOGY ON LAND DISPOSAL; HEALTH AND HYGIENE ASPECTS OF SPRAY IRRIGATION; RESPONSE OF RECEIVING WATERS TO LAND DISPOSAL EFFLUENT; AND, ALTERNATIVE PROCESSES AND COMBINATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007191

PUBLICATION DATE: 76

TITLE: ORIENTATION TO WASTEWATER TREATMENT OPERATION.

DESCRIPTOR: *DESIGN; *EQUIPMENT; *FACILITIES; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 346P. PRICE: $1.00 PER DOCUMENT PLUS $.03 PER PAGE.

ABSTRACT: THIS TRAINING MANUAL PRESENTS MATERIAL FOR A COURSE DESIGNED FOR WATER POLLUTION AGENCY PERSONNEL WHO ARE RELATIVELY UNFAMILIAR WITH WASTEWATER TREATMENT METHODS AND TREATMENT PLANT OPERATION. CHAPTERS INCLUDE: WHY TREAT WASTES; WASTEWATER FACILITIES; PRETREATMENT -- RACKS, SCREENS, COMMINUTORS AND GRIT REMOVAL; SEDIMENTATION AND FLOTATION; TRICKLING FILTERS; ACTIVATED SLUDGE DIGESTION AND HANDLING; WASTE TREATMENT PONDS; DISINFECTION AND CHLORINATION; FLOW MEASUREMENTS; PLANT SAFETY AND GOOD HOUSEKEEPING; AND, SAMPLING.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW007192

PUBLICATION DATE: 73

TITLE: COMPARATIVE COSTS OF EROSION AND SEDIMENT CONTROL, CONSTRUCTION ACTIVITIES.

DESCRIPTOR: *CASE STUDIES; *CONSTRUCTION; *COSTS; *EROSION; *ECONOMIC FACTORS; *EROSION CONTROL; EVALUATION; LAND MANAGEMENT; *SEDIMENT CONTROL; SOIL EROSION; SOILS; WATERSHEDS

DESCRIPTIVE NOTE: 205P.

ABSTRACT: COST INFORMATION ON EROSION AND SEDIMENT CONTROL MEASURES WAS ASSEMBLED, EVALUATED AND DOCUMENTED FOR MORE THAN 25 METHODS IN WIDESPREAD USE IN BOTH THE HUMID EASTERN AND ARID WESTERN UNITED STATES. ELEMENTAL DATA FOR COST PARAMETERS WERE OBTAINED FOR EACH METHOD THROUGH EXTENSIVE INVESTIGATION OF EROSION AND SEDIMENT CONTROL CONTRACTS, ESTIMATES PROVIDED BY CONTRACTOR ESTIMATORS, FURNISHED JOB COSTS, EQUIPMENT AND SUPPLY CATALOGS, AND OTHER SOURCES.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007193

PUBLICATION DATE: DEC 76

TITLE: NONPOINT SOURCE CONTROL GUIDANCE CONSTRUCTION ACTIVITIES.

DESCRIPTOR: *CONSTRUCTION; *FACILITIES; *MANAGEMENT; *NONPOINT SOURCES; PLANNING; *POLLUTION CONTROL; *RECOMMENDATIONS; *TECHNICAL REPORTS; *WATER QUALITY

DESCRIPTIVE NOTE: 115P.

ABSTRACT: THIS NONPOINT SOURCE CONTROL DOCUMENT PROVIDES TECHNICAL INFORMATION ON FACTORS RELATING TO CONSTRUCTION OF POLLUTION CONTROL DEVICES. PRESENTED IS INFORMATION ON THE IDENTIFICATION AND ASSESSMENT OF EXISTING CONSTRUCTION NONPOINT SOURCE PROBLEMS; ANALYSIS AND PROCEDURES NEEDED FOR SELECTION OF CONTROLS; DESCRIPTIONS OF INDIVIDUAL AND SYSTEMS OF BEST MANAGEMENT PRACTICES, WITH A METHOD FOR DETERMINING THEIR EFFECTIVENESS; AND SEVERAL METHODS FOR PREDICTING POTENTIAL POLLUTION PROBLEMS FROM FUTURE CONSTRUCTION ACTIVITIES.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007194

PUBLICATION DATE: 68

TITLE: BASIC PRINCIPLES OF SUPERVISORY MANAGEMENT - SECOND EDITION.

DESCRIPTOR: AUTOINSTRUCTIONAL PROGRAMS; *CASE STUDIES; COMMUNICATIONS; DECISION MAKING; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *POST SECONDARY EDUCATION; *PROGRAMED INSTRUCTION; *SUPERVISION

ABSTRACT: THE PROGRAMMED SELF-INSTRUCTION TEXT AND NOTEBOOK ARE COMPONENTS OF A TRAINING COURSE ON THE BASIC PRINCIPLES OF SUPERVISORY MANAGEMENT. THE STEP-BY-STEP CHAPTERS

INCLUDE: THE CASE; PLANNING; ORGANIZATION; CONTROL; STANDARDS; COMMUNICATIONS; MOTIVATION; AND DECISION-MAKING.

AVAILABILITY: AMERICAN MANAGEMENT ASSOCIATION, AMERICAN WATER WORKS ASSOCIATION, 6666 W. QUINCY AVE., DENVER, CO 82035

IRIS ACCESSION NUMBER: EW007198

PUBLICATION DATE: 81

TITLE: ECOLOGICAL ASSESSMENTS OF EFFLUENT IMPACTS ON COMMUNITIES OF INDIGENOUS AQUATIC ORGANISMS.

PERSONAL AUTHOR: BATES, J. M.; WEBER, C. I.

DESCRIPTOR: *AQUATIC ENVIRONMENT; COMPUTERS; *ECOLOGY; *ENVIRONMENTAL ASSESSMENT; MEASUREMENT TECHNIQUES; *MICROBIOLOGY; *MODELS; SAMPLING; *STREAMS; WATER POLLUTION CONTROL; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 335P. PRICE: $32.50

ABSTRACT: PRESENTED IS A COMPILATION OF 17 PAPERS ADDRESSING SUCH INFORMATION AS COMPUTER-BASED PREDICTIVE ECOSYSTEM MODELS, SCALE-MODEL STREAMS, SELECTION OF TARGET SPECIES, EFFLUENT AND/OR RECEIVING WATER SPECIFICATIONS, AND ALGAL PERIPHYTON IN STREAM ASSESSMENTS AND SAMPLING. CASE HISTORIES ARE ALSO PRESENTED.

AVAILABILITY: AMERICAN SOCIETY FOR TESTING AND MATERIALS, 1916 RACE ST., PHILADELPHIA, PA 19103

IRIS ACCESSION NUMBER: EW007199

PUBLICATION DATE: 81

TITLE: GROUNDWATER MONITORING.

PERSONAL AUTHOR: EVERETT, LORNE G.

DESCRIPTOR: *CASE STUDIES; COST EFFECTIVENESS; DESIGN; EVALUATION; *GROUNDWATER; *HANDBOOKS; *MANAGEMENT; *MONITORING; POLLUTANTS; *WATER QUALITY; *WELLS

DESCRIPTIVE NOTE: 529P. PRICE: $150.00

ABSTRACT: THIS HANDBOOK DESCRIBES A COST-EFFECTIVE, GENERIC METHODOLOGY FOR MONITORING THE QUALITY OF GROUNDWATER. THE BOOK PROVIDES A COMPREHENSIVE DESCRIPTION OF THE METHODOLOGY, INCLUDING THE NEEDS, OBJECTIVES, AND CONSTRAINTS OF SUCH A PROGRAM. THE CONSTITUENTS OF GROUNDWATER POLLUTION ARE DISCUSSED, AS WELL AS THE SOURCES AND CAUSES OF SUCH POLLUTANTS. ALSO EXAMINED ARE MANY APPLICATIONS FOR MONITORING TECHNIQUES, INCLUDING HAZARDOUS WASTE DISPOSAL, ENERGY EXTRACTION, LANDFILL LEACHATE, AND SEPTIC FIELDS. CHAPTERS INCLUDE: GROUNDWATER MONITORING METHODOLOGY; GROUNDWATER MONITORING METHODS AND COSTS; GROUNDWATER DATA MANAGEMENT; MONITORING DISPOSAL WELLS; AND, ILLUSTRATIVE EXAMPLES.

AVAILABILITY: GENERAL ELECTRIC COMPANY, BUSINESS GROWTH SERVICES, 120 ERIE BLVD., DEPT. 551, SCHENECTADY, NY 12305

IRIS ACCESSION NUMBER: EW007200

PUBLICATION DATE: DEC 80

TITLE: NATIONAL SURVEY OF WATER AND WASTEWATER DESALTING PLANT OPERATOR CERTIFICATION PROGRAMS.

DESCRIPTOR: *CERTIFICATION; *DESALTING; *EDUCATIONAL NEEDS; *OPERATOR TRAINING; *STATE PROGRAMS; *SURVEYS; *TRAINING PROGRAMS; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 12P. PB81-185308

ABSTRACT: THIS STATE-BY-STATE SURVEY EXAMINES THE EXTENT TO WHICH EXISTING STATE WATER AND WASTEWATER TREATMENT OPERATOR CERTIFICATION PROGRAMS INCORPORATE DESALTING WITHIN THE OTHER ELEMENTS OF WATER SCIENCES. THE SURVEY SHOWS A LACK OF INVOLVEMENT AND AWARENESS TO THE GROWING IMPORTANCE OF DESALTING EXPERTISE FOR OPERATORS OF WATER AND WASTEWATER FACILITIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007212

PUBLICATION DATE: 75

TITLE: HINTS FOR MANAGERS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *AUDIO TAPES; *DECISION MAKING; FACILITIES; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); PLANNING; *POST SECONDARY EDUCATION; *SUPERVISION; *UTILITIES; *WATER TREATMENT; *WASTEWATER TREATMENT

ABSTRACT: PRESENTED IS AN AUDIO-TAPE SUPPLEMENT TO A HOME STUDY COURSE ON MANAGEMENT PRINCIPLES FOR WATER/WASTEWATER UTILITY PLANT MANAGERS. A GROUP OF SPECIALISTS AND EXPERTS IN MANAGEMENT, PARTICULARLY AS RELATED TO WATER/WASTEWATER PLANT OPERATION, DISCUSS MANAGERIAL FUNCTIONS, PERSONNEL SELECTION, BASIC CONCEPTS OF COMMUNICATION, PROBLEM SOLVING AND MOTIVATION.

AVAILABILITY: INSTRUCTIONAL MEDIA CENTER, MICHIGAN STATE UNIVERSITY, LANSING, MI

IRIS ACCESSION NUMBER: EW007213

TITLE: OIL SPILL RESPONSE TRAINING PROGRAM.

DESCRIPTOR: *AUDIOVISUAL AIDS; FIRES; GOVERNMENT POLICY; *INDUSTRY; *INSTRUCTIONAL MATERIALS; *OIL; *OIL SPILLS; *PETROLEUM INDUSTRY; PLANNING; *POST SECONDARY EDUCATION; *POLLUTION; *SAFETY; *SPILLS; *TRAINING; *TRAINING PROGRAMS;

WASTE DISPOSAL

DESCRIPTIVE NOTE: 23P.

ABSTRACT: THIS TRAINING PROGRAM IS INTENDED TO INDOCTRINATE PERSONNEL IN THE PREVENTION OF OIL SPILLS THAT MAY OCCUR DURING THE EXTRACTION, REFINING, DISTRIBUTION AND USE OF PETROLEUM PRODUCTS. MANAGEMENT AND CORPORATE OFFICERS WHO ARE RESPONSIBLE FOR CORPORATE RESPONSE TO AN OIL SPILL AS WELL AS FIELD PERSONNEL WHO ARE REQUIRED TO PREPARE FOR AND COMBAT SKILLS ALL RECEIVE APPROPRIATE TRAINING FROM THIS PROGRAM. THE FIVE SERIES OF THE PROGRAM ARE: GOVERNMENT POLICIES, OIL SPILL CONTINGENCY PLANNING, SPILL CONTAINMENT AND REMOVAL, MARINE SALVAGE, BLOWOUTS, PIPELINES, AND FIRE FIGHTING. THE PRIMARY INSTRUCTION TOOL IS VIDEOTAPE IN THIS MULTI-MEDIA PROGRAM.

AVAILABILITY: NUS CORPORATION, HEADQUARTERS, 4 RESEARCH PLACE, ROCKVILLE, MD 20850

IRIS ACCESSION NUMBER: EW007236

PUBLICATION DATE: AUG 77

TITLE: OPERATOR CERTIFICATION 1975 STATUS REPORT.

DESCRIPTOR: *ADMINISTRATION; *CERTIFICATION; CLASSIFICATION; *OPERATORS; *OPERATOR TRAINING; *PERSONNEL; *PROGRAM DESCRIPTIONS; *STATE PROGRAMS; *SURVEYS; *TRAINING PROGRAMS; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 1862-1876P.

ABSTRACT: THIS REPORT PRESENTS THE RESULTS OF A SURVEY OF OPERATOR CERTIFICATION IN THE UNITED STATES AND CANADA CONDUCTED DURING THE LATTER HALF OF 1975. TOPICS EXAMINED ARE: ADMINISTRATION, FACILITIES AND POSITIONS REQUIRING CERTIFIED PERSONNEL, FEES CHARGED, RENEWAL REQUIREMENTS, RECORDS AND REPORTS, CERTIFICATION PROGRAM STAFFING, AND CERTIFICATION PROGRAM STATISTICS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION

IRIS ACCESSION NUMBER: EW007239

PUBLICATION DATE: DEC 81

TITLE: A CONSTRUCTION GRANTS PROGRAM SUCCESS STORY.

PERSONAL AUTHOR: BOETTCHER, GREG

DESCRIPTOR: *CASE STUDIES; *CONSTRUCTION GRANTS; *COSTS; *DESIGN; EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 23-27P.

ABSTRACT: THIS ARTICLE REPORTS ON THE SUCCESS THAT WEST PLAINS, MISSOURI HAD WITH THE EMERGENCY CONSTRUCTION OF AN ADVANCED SECONDARY WASTEWATER TREATMENT FACILITY WITH DISINFECTION. THE PROJECT, BUILT UNDER THE CONSTRUCTION GRANTS PROGRAM, HAD COSTS WITHIN INITIAL ESTIMATES, PROJECT SCHEDULES WHICH WERE MET, OPERATING COSTS AS WERE ESTIMATED, AND PLANT PERFORMANCE WHICH EXCEEDS DESIGN PARAMETERS.

AVAILABILITY: PUBLIC WORKS, V112 N12

IRIS ACCESSION NUMBER: EW007240

PUBLICATION DATE: DEC 81

TITLE: CONTRACT OPERATION SERVICE HELPS A SMALL COMMUNITY.

PERSONAL AUTHOR: SUTTON, ROBERT; JOHNSON, DONALD

DESCRIPTOR: *CASE STUDIES; *CONTRACT OPERATIONS; *COST EFFECTIVENESS; DESIGN; *ECONOMIC FACTORS; *FACILITIES; *MAINTENANCE; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 54-55P.

ABSTRACT: THIS ARTICLE DESCRIBES THE SUCCESS THAT JAMESTOWN, RHODE ISLAND HAS EXPERIENCED WITH THE CONTRACT OPERATION OF THEIR 750,000 GPD WASTEWATER TREATMENT PLANT AND THREE PUMPING STATIONS. IN ADDITION, SUCCESSFUL OPERATIONS AND MAINTENANCE PRACTICES ARE PRESENTED.

AVAILABILITY: PUBLIC WORKS, V112 N12

IRIS ACCESSION NUMBER: EW007241

PUBLICATION DATE: DEC 81

TITLE: TRACE ANALYSES FOR WASTEWATERS.

PERSONAL AUTHOR: GLASER, JOHN A.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; DETECTION; *LABORATORY TECHNIQUES; *POLLUTANTS; *TRACE ANALYSIS; *TRACE ELEMENTS; *WASTEWATER

DESCRIPTIVE NOTE: 1426-35P.

ABSTRACT: THIS ARTICLE DISCUSSES A NEW PERFORMANCE CRITERION FOR CHEMICAL ANALYSES OF WASTEWATER CALLED METHOD DETECTION LIMIT. THIS TECHNIQUE IS DEFINED AS THAT CONCENTRATION OF THE ANALYTE THAT CAN BE DETECTED AT A SPECIFIC CONFIDENCE LEVEL. BOTH THEORY AND APPLICATIONS FOR RELIABLE ANALYSES OF PRIORITY POLLUTANTS ARE DISCUSSED IN DETAIL.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N12

IRIS ACCESSION NUMBER: EW007242

PUBLICATION DATE: 81

TITLE: MANUAL OF GROUND-WATER SAMPLING PROCEDURES.

PERSONAL AUTHOR: SCALF, MARION R.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DATA COLLECTION; GEOLOGY; *GROUNDWATER; HYDROLOGY; *MANUALS; MONITORING; POLLUTANTS; *SAMPLING; *WATER QUALITY; *WELLS

DESCRIPTIVE NOTE: 93P. PRICE: $12.00 FOR MEMBERS; $15.00 FOR NON-MEMBERS.

ABSTRACT: THIS REPORT IS A SUMMARY OF SEVERAL PROCEDURES CURRENTLY USED BY THE GROUNDWATER COMMUNITY TO COLLECT GROUNDWATER QUALITY DATA. TOPICS INCLUDE: THE OBJECTIVES OF GROUNDWATER SAMPLING; PRELIMINARY EVALUATIONS OF POLLUTANTS; THE NATURE OF POLLUTION SOURCES; HYDROGEOLOGIC CONSIDERATIONS; CONSTRUCTION OF MONITORING WELLS; COLLECTION OF GROUNDWATER SAMPLES; SAMPLING SUBSURFACE SOLIDS; AND RECORD KEEPING.

AVAILABILITY: MAIL ORDER DEPARTMENT, NATIONAL WATER WELL ASSOCIATION, 500 W. WILSON BRIDGE ROAD, SUITE 135, WORTHINGTON, OH 43085

IRIS ACCESSION NUMBER: EW007244

PUBLICATION DATE: AUG 80

TITLE: CHANGING ONE TON CONTAINERS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *CHLORINE; *DISINFECTION; *EQUIPMENT; FACILITIES; GAS CHLORINATION; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; WATER QUALITY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INCLUDES PRE-TEST, STUDENT WORKBOOK, INSTRUCTOR'S GUIDE, AND POST-TEST.

ABSTRACT: CONTAINED IN THIS INSTRUCTIONAL PACKAGE ON CHANGING A ONE-TON CHLORINE CONTAINER ARE 118 SLIDES, A CASSETTE TAPE, PRE AND POST-TESTS, A STUDENT WORKBOOK AND AN INSTRUCTOR'S GUIDE. STRESSED ARE SAFETY AND CHANGING A ONE-TON CHLORINE CONTAINER IN LESS THAN ONE HOUR.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW007245

PUBLICATION DATE: DEC 81

TITLE: WHEN A WATER SUPPLY WENT BAD.

DESCRIPTOR: *CASE STUDIES; *CONTAMINATION; *DRINKING WATER; *GRANULAR ACTIVATED CARBON; *GROUNDWATER; *TOXIC CHEMICALS; *TOXIC SUBSTANCES; *WATER QUALITY; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 33-36P.

ABSTRACT: THIS ARTICLE EXAMINES HOW TWO NEW JERSEY COMMUNITIES DEALT WITH CONTAMINATION OF THEIR GROUNDWATER SUPPLIES BY TOXIC CHEMICALS WITH THE ASSISTANCE OF AN ACTIVATED CARBON TREATMENT SYSTEM. ALSO DISCUSSED IS TRANSPORTABLE GRANULAR ACTIVATED CARBON EQUIPMENT AND AN INTERVIEW WITH THE MAYORS OF THE TWO COMMUNITIES.

AVAILABILITY: AMERICAN CITY & COUNTY, V96 N12

IRIS ACCESSION NUMBER: EW007246

PUBLICATION DATE: DEC 81

TITLE: INSTRUMENT INSIGHTS.

PERSONAL AUTHOR: WILLIAMS, CLAUDE N.; MANROSS, ROBERT C.

DESCRIPTOR: *EQUIPMENT; *INSTALLATION; *INSTRUMENTATION; *MAINTENANCE; *METERS; *SENSORS; *SUSPENDED SOLIDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 16P.

ABSTRACT: THIS ARTICLE FOCUSES ATTENTION ON THE INSTALLATION AND MAINTENANCE OF ON-LINE SUSPENDED SOLIDS METERS. A CHECKLIST IS PROVIDED WHICH EXAMINES: LOCATION, MOUNTING, ELECTRICAL CONNECTIONS, CLEANING, CALIBRATION, AND SERVICING.

AVAILABILITY: POLLUTION ENGINEERING, V13 N12

IRIS ACCESSION NUMBER: EW007247

PUBLICATION DATE: DEC 81

TITLE: SODIUM BOROHYDRIDE CONTROLS HEAVY METAL DISCHARGE.

PERSONAL AUTHOR: COOK, MICHAEL M.; LANDER, JOSEPH A.

DESCRIPTOR: *CHEMICAL TREATMENT; *COST EFFECTIVENESS; EFFLUENTS; *HEAVY METALS; *LEAD; *MERCURY; *RECYCLING; *RESOURCE RECOVERY; *SILVER; *SODIUM BOROHYDRIDE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 36-38P.

ABSTRACT: THIS ARTICLE EXAMINES IN DETAIL THE USE OF SODIUM BOROHYDRIDE AS AN ALTERNATIVE CHEMICAL TREATMENT. THE ADVANTAGES OF THIS TREATMENT METHOD INCLUDE LOW COSTS AND ENERGY USE IN ADDITION TO EFFECTIVE TREATMENT OF HEAVY METALS. SPECIFIC ATTENTION IS FOCUSED ON THE REMOVAL AND RECOVERY OF LEAD, MERCURY, AND SILVER.

AVAILABILITY: POLLUTION ENGINEERING, V13 N12

IRIS ACCESSION NUMBER: EW007248

PUBLICATION DATE: DEC 81

TITLE: ROTARY KILN INCINERATORS FOR SLUDGE DISPOSAL.

PERSONAL AUTHOR: KENSON, ROBERT E.

DESCRIPTOR: *DESIGN; *EQUIPMENT; *INCINERATION; *INCINERATORS; MAINTENANCE; *OPERATIONS (WASTEWATER); *ROTARY KILN INCINERATORS; *SLUDGE; *SLUDGE DISPOSAL; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 44-45P.

ABSTRACT: THIS ARTICLE EXAMINES THE USE OF ROTARY KILN INCINERATORS FOR SLUDGE DISPOSAL. SPECIFIC ATTENTION IS FOCUSED ON DESIGN AND PLANNING CRITERIA AND OPERATIONS AND MAINTENANCE.

AVAILABILITY: POLLUTION ENGINEERING, V13 N12

IRIS ACCESSION NUMBER: EW007249

PUBLICATION DATE: 78

TITLE: FUNDAMENTALS OF PNEUMATICS - PART 1 THEORY.

DESCRIPTOR: *AUDIOVISUAL AIDS; *INSTRUCTIONAL MATERIALS; *PNEUMATICS; *POST SECONDARY EDUCATION; *THEORIES

DESCRIPTIVE NOTE: 24P.

ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE BASIC PRINCIPLES OF PNEUMATICS. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: HISTORY, RELATIONSHIP TO HYDRAULICS, PRESSURE, HEAT, HUMIDITY, FLOW, AND VACUUM.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007250

PUBLICATION DATE: 78

TITLE: FUNDAMENTALS OF PNEUMATICS - PART 2 COMPONENTS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *COMPONENTS; DEVICES; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *PNEUMATICS; *POST SECONDARY EDUCATION

DESCRIPTIVE NOTE: 43P.

ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE BASIC PRINCIPLES OF COMPONENT OPERATION. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: COMPRESSORS, COOLERS, RECEIVERS, DRYERS, DISTRIBUTION SYSTEMS, FILTERS, LUBRICATORS, FRL SYSTEM, VALVES, ACTUATORS, AND MUFFLERS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007252

PUBLICATION DATE: 78

TITLE: FUNDAMENTALS OF PNEUMATICS - PART 4 SYMBOLS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *PNEUMATICS; *POST SECONDARY EDUCATION; *SYMBOLS

DESCRIPTIVE NOTE: 21P.

ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE USE OF BASIC GRAPHIC SYMBOLS IN PNEUMATICS. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: LINES, ADJUSTABLE COMPONENTS, COMPRESSORS AND VACUUM PUMPS, COOLERS, FILTERS, RECEIVERS, GAUGES, DRYERS, LUBRICATORS, FRL SYSTEMS, PRESSURE CONTROL VALVES, FLOW CONTROL VALVES, DIRECTIONAL CONTROL VALVES, ACTUATORS, MUFFLERS, AND COMPLETE SYSTEMS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007253

PUBLICATION DATE: 78

TITLE: FUNDAMENTALS OF PNEUMATICS - INSTRUCTOR'S GUIDE.

DESCRIPTOR: *AUDIOVISUAL AIDS; COURSE CONTENT; EQUIPMENT; *INSTRUCTIONAL MATERIALS; *PNEUMATICS; *POST SECONDARY EDUCATION; SYMBOLS; *TEACHING GUIDES; THEORY; TROUBLESHOOTING

DESCRIPTIVE NOTE: 8P.

ABSTRACT: THIS INSTRUCTOR'S MANUAL PROVIDES COURSE INFORMATION AND LESSON PLANS FOR A FOUR PART AUDIOVISUAL COURSE ON THE FUNDAMENTALS OF PNEUMATICS. THE FOUR TOPICS COVERED ARE: THEORY, COMPONENTS TROUBLESHOOTING, AND SYMBOLS. BACKGROUND MATERIAL, A PROGRAM OUTLINE, AND A UNIT TEST ARE PROVIDED FOR EACH TOPIC.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007254

PUBLICATION DATE: 78

TITLE: PRACTICAL ELECTRICITY - PART I VOLTS, OHMS, AMPS, INDUCTION.

DESCRIPTOR: *AUDIOVISUAL AIDS; *ELECTRICAL SYSTEMS; *ELECTRICITY; ELECTROMAGNETISM; *GUIDES; *INSTRUCTIONAL

MATERIALS; MEASUREMENT; *POST SECONDARY EDUCATION; TRANSFORMERS

DESCRIPTIVE NOTE: 32P.

ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE BASIC PRINCIPLES OF ELECTRICITY. THIS AUDIO-VISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: ELECTRICAL THEORY; MEASUREMENT OF ELECTRICAL ENERGY; BASIC ELECTRICAL CIRCUITS; ELECTROMAGNETISM; AND, TRANSFORMERS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007255

PUBLICATION DATE: 78

TITLE: PRACTICAL ELECTRICITY - PART II ELECTROCHEMICAL AND MECHANICAL COMPONENTS.

DESCRIPTOR: *AUDIOVISUAL AIDS; ELECTRICAL SYSTEMS; *ELECTRICITY; *EQUIPMENT; *GUIDES; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION

DESCRIPTIVE NOTE: 26P.

ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE OPERATION OF ELECTROMECHANICAL AND ELECTROCHEMICAL COMPONENTS. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: GENERATORS, MOTORS, SOLENOIDS, SWITCHES, CIRCUIT BREAKERS, GROUND-FAULT CIRCUIT INTERRUPTERS, AND BATTERIES.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007256

PUBLICATION DATE: 78

TITLE: PRACTICAL ELECTRICITY - PART III SOLID-STATE COMPONENTS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *ELECTRICAL SYSTEMS; *ELECTRICITY; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *SOLID-STATE COMPONENTS

DESCRIPTIVE NOTE: 24P.

ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON SOLID-STATE COMPONENTS. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: CONDUCTORS, INSULATORS, SEMI-CONDUCTOR THEORY, DIODES, TRANSISTOR, SILICON-CONTROLLED RECTIFIERS, AND TRIALS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007257

PUBLICATION DATE: 78

TITLE: PRACTICAL ELECTRICITY - PART 4 ELECTRICAL SCHEMATICS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *ELECTRICAL SYSTEMS; *ELECTRICITY; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *SCHEMATICS; *SYMBOLS

DESCRIPTIVE NOTE: 18P.

ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE USE OF THE BASIC GRAPHIC SYMBOLS EMPLOYED IN THE ELECTRICAL INDUSTRY. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: USE OF SCHEMATICS, SOURCES OF ELECTRICAL ENERGY, CONNECTIONS, RESISTORS, CAPACITORS, DIODES, SILICON CONTROLLED CRYSTALS AND INTEGRATED CIRCUITS, SWITCHES, ELECTROMAGNETIC COMPONENTS, CIRCUIT BREAKERS AND FUSES, COMMON ELECTRICAL DEVICES, AND CIRCUITS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007258

PUBLICATION DATE: 78

TITLE: PRACTICAL ELECTRICITY - INSTRUCTOR'S GUIDE.

DESCRIPTOR: *AUDIOVISUAL AIDS; *COURSE CONTENT; DEVICES; *ELECTRICITY; EQUIPMENT; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; SOLID STATE COMPONENTS; *TEACHING GUIDES

DESCRIPTIVE NOTE: 8P.

ABSTRACT: THIS INSTRUCTOR'S MANUAL PROVIDES COURSE INFORMATION AND LESSON PLANS FOR A THREE-PART AUDIO-VISUAL COURSE ON PRACTICAL ELECTRICITY. THE THREE TOPICS COVERED ARE: VOLTS, OHMS, AMPS, AND INDUCTION; ELECTRICAL COMPONENTS; AND, SOLID STATE COMPONENTS. BACKGROUND MATERIAL, A PROGRAM OUTLINE, AND A UNIT TEST IS PROVIDED FOR EACH TOPIC.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007263

PUBLICATION DATE: 77

TITLE: THE DESIGN OF LOW-MAINTENANCE, TECHNOLOGY-SIMPLE WASTEWATER TREATMENT SYSTEMS TO MEET THE 1977 EFFLUENT STANDARDS.

PERSONAL AUTHOR: RICH, LINVIL G.

DESCRIPTOR: *DESIGN; *DOMESTIC WASTES; *EFFLUENTS; EQUIPMENT; MAINTENANCE; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *STANDARDS; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER TREATMENT; WATER QUALITY

ABSTRACT: THIS REPORT DESCRIBES THE RATIONAL DESIGN OF SEVERAL TYPES OF LOW-MAINTENANCE, TECHNOLOGY-SIMPLE SYSTEMS THAT CAN PROVIDE RELIABLE TREATMENT FOR DOMESTIC WASTEWATER DISCHARGES. TOPICS DISCUSSED INCLUDE: FLOW EQUALIZATION, BIO-CONVERSION, BIO-FLOCCULATION, SOLIDS SEPARATION, SOLIDS STABILIZATION, EFFLUENT POLISHING, AND AERATED LAGOONS.

AVAILABILITY: COLLEGE OF ENGINEERING, CLEMSON UNIVERSITY, CLEMSON, SC

IRIS ACCESSION NUMBER: EW007265

PUBLICATION DATE: 75

TITLE: AN ANALYSIS OF THE WASTEWATER TREATMENT MAINTENANCE MECHANIC OCCUPATION.

PERSONAL AUTHOR: CLARK, ANTHONY B.; AND OTHERS

DESCRIPTOR: *ENVIRONMENTAL TECHNICIANS; *JOB ANALYSIS; JOB SKILLS; MAINTENANCE; *MECHANICS; *OCCUPATIONAL INFORMATION; OCCUPATIONAL SURVEYS; *TASK ANALYSIS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 101P.

ABSTRACT: THE GENERAL PURPOSE OF THE OCCUPATIONAL ANALYSIS IS TO PROVIDE WORKABLE, BASIC INFORMATION DEALING WITH THE MANY AND VARIED DUTIES PERFORMED IN THE WASTEWATER TREATMENT MECHANICS OCCUPATION. THE DOCUMENT OPENS WITH A BRIEF INTRODUCTION FOLLOWED BY A JOB DESCRIPTION. THE BULK OF THE DOCUMENT IS PRESENTED IN TABLE FORM. TWELVE DUTIES ARE BROKEN DOWN INTO A NUMBER OF TASKS AND FOR EACH TASK A TWO-PAGE TABLE IS PRESENTED, SHOWING ON THE FIRST PAGE: TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON; PERFORMANCE KNOWLEDGE (RELATED ALSO TO DECISIONS, CUES AND ERRORS); SAFETY--HAZARD; AND ON THE SECOND PAGE: SCIENCE; MATH--NUMBER SYSTEMS; AND COMMUNICATIONS (PERFORMANCE MODES, EXAMPLES, AND SKILLS AND CONCEPTS). THE DUTIES INCLUDE PERFORMANCE OF: SCREENINGS AND COMMINUTING; GRIT REMOVAL; PUMPING; FLOW MEASUREMENT; PRETREATMENT BY CHEMICAL ADDITION; COAGULATION AND FLOCCULATION; SEDIMENTATION; SLUDGE WASTING AND DIGESTION; BIOLOGICAL DECOMPOSITION VIA ACTIVATED SLUDGE, TRICKLING FILTERS, AND OXIDATION LAGOONS; AND CHLORINATION. THE DOCUMENT CONCLUDES WITH THREE APPENDIXES COVERING WORK ATTITUDES AND DESIRABLE PERSONAL CHARACTERISTICS, A LIST OF STANDARD TOOLS, AND 40 PAGES OF ITEMS USED IN WASTEWATER TREATMENT. (ED 170 998)

AVAILABILITY: ERIC DOCUMENT REPRODUCTION SERVICE, P. O. BOX 190, ARLINGTON, VA 22210

IRIS ACCESSION NUMBER: EW007270

PUBLICATION DATE: APR 76

TITLE: ABC A CLASSIFICATION SYSTEM FOR WATER AND WASTEWATER FACILITIES AND PERSONNEL PART 3--EXISTING EXAMINATION SYSTEMS: A CURRENT STATUS REPORT.

PERSONAL AUTHOR: SEIDEL, HARRIS F.

DESCRIPTOR: *CERTIFICATION; CLASSIFICATION; EVALUATION; *EXAMINATIONS; *OPERATOR TRAINING; PERSONNEL; PROGRAM DEVELOPMENT; RECOMMENDATIONS; *STATE-OF-THE-ART REVIEWS; *TESTING; *UTILITIES (WATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32P.

ABSTRACT: THIS REPORT EXAMINES EFFORTS TO DEVELOP BASELINE DATA AND EVALUATION PROCEDURES THAT CAN BE USED TO IMPROVE EXISTING OR DEVELOP NEW WATER AND WASTEWATER OPERATOR CERTIFICATION PROGRAMS. SECTIONS INCLUDE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS; EXAMINATION SURVEY RESULTS; EXAMINATION ADMINISTRATIVE PROCEDURES AND THE EEOC REQUIREMENTS; THE ABC EVALUATION SYSTEM; EXAMINATION DEVELOPMENT; EXISTING EXAMINATIONS; OCCUPATIONAL LICENSING AND PUBLIC POLICY; AND THE PROPOSED ABC EXAMINATION SYSTEM.

AVAILABILITY: U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER PROGRAM OPERATIONS, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW007271

PUBLICATION DATE: JUL 75

TITLE: ABC A CLASSIFICATION SYSTEM FOR WATER AND WASTEWATER FACILITIES AND PERSONNEL - PART 2--PERSONNEL CERTIFICATION AND EXAMINATION SYSTEM.

PERSONAL AUTHOR: WUBBENA, ROBERT L.

DESCRIPTOR: *ABC; *CERTIFICATION; *CLASSIFICATION; EXAMINATIONS; *OPERATORS; *OPERATOR TRAINING; *PERSONNEL; PROGRAM DESCRIPTIONS; *RECOMMENDATIONS; *TRAINING PROGRAMS; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 59P.

ABSTRACT: THE BASIC ELEMENTS OF THIS REPORT ARE: (1) IDENTIFICATION OF PERSONNEL REQUIRING CERTIFICATION BY LAW OR REGULATION; (2) IDENTIFICATION OF PERSONNEL WHO SHOULD BE ENCOURAGED TO BE CERTIFIED TO IMPROVE THE FACILITY OPERATION AND TO ESTABLISH A METHOD OF ENTRY INTO THE FIELD; (3) A STANDARD DEFINITION OF THE TERM "RESPONSIBLE CHARGE"; (4) A METHOD OF CLASSIFICATION COMPARISON BETWEEN ABC AND INDIVIDUAL CERTIFICATION PROGRAMS BASED ON EDUCATION AND EXPERIENCE REQUIREMENTS; AND (5) AN EXAMINATION SYSTEM AND INITIAL EXAMINATION CRITERIA BASED ON A MODULAR PLAN.

AVAILABILITY: U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER PROGRAM OPERATIONS, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW007272

PUBLICATION DATE: JUL 76

TITLE: ABC ROLES AND RESPONSIBILITIES FOR DEVELOPING A COMPREHENSIVE STATE WATER AND WASTEWATER OPERATOR TRAINING PROGRAM.

PERSONAL AUTHOR: WUBBENA, ROBERT L.

DESCRIPTOR: *EDUCATIONAL PROGRAMS; *EDUCATIONAL NEEDS; *MANAGEMENT; *OPERATOR TRAINING; PROGRAM DESCRIPTIONS; *RECOMMENDATIONS; *SURVEYS; *STATE PROGRAMS; TRAINING NEEDS; *TRAINING PROGRAMS; UTILITIES; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 37P.

ABSTRACT: THIS STUDY IS THE FIRST NATIONWIDE COMPREHENSIVE ANALYSIS OF THE AVAILABILITY OF TRAINING AND PROBLEMS ASSOCIATED WITH THE DEVELOPMENT OF EFFECTIVE STATE PROGRAMS. BASED ON THE ANALYSIS OF FOUR STATE PROGRAMS AND A SURVEY OF THE OTHER STATES AND 10 PROVINCES, THIS REPORT IDENTIFIES THE ROLES AND RESPONSIBILITIES FOR UTILITY MANAGEMENT, EDUCATIONAL INSTITUTIONS, REGULATORY AGENCIES, CONSULTING ENGINEERS, PROFESSIONAL ORGANIZATIONS AND OTHERS. SECTIONS INCLUDE: BASIS FOR EFFECTIVE TRAINING PROGRAMS; ESTABLISHMENT OF A BASIS FOR TRAINING; DEVELOPMENT OF TRAINING MATERIALS AND METHODS; STANDARDIZED DELIVERY SYSTEMS; AND MEANS TO PROVIDE COORDINATION AND CONTROL.

AVAILABILITY: OFFICE OF WATER PROGRAMS OPERATIONS, U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW007274

PUBLICATION DATE: NOV 78

TITLE: WASTEWATER TREATMENT PLANT CONTINUING TRAINING PROGRAM.

PERSONAL AUTHOR: DAVANZO, A. C.

DESCRIPTOR: *CURRICULUM; *EDUCATIONAL PROGRAMS; *INSTRUCTIONAL MATERIALS; *MANPOWER DEVELOPMENT; *MICHIGAN; *OPERATOR TRAINING; *POST SECONDARY EDUCATION; *PROGRAM DESCRIPTIONS; *TRAINING PROGRAMS; *WASTEWATER TREATMENT

ABSTRACT: PRESENTED ARE THE PERMANENT TRAINING PROGRAM PROPOSALS SUBMITTED BY THE DETROIT WATER AND SEWERAGE DEPARTMENT (DWSD) TO THE U.S. ENVIRONMENTAL PROTECTION AGENCY (USEPA) AND THE MICHIGAN DEPARTMENT OF NATURAL RESOURCES (MDNR) AS PART OF A CONSENT JUDGEMENT RESULTING FROM LITIGATION AGAINST DWSD. REQUIRED IN THE CONSENT JUDGEMENT WAS THE DEVELOPMENT OF A PERMANENT, ON-GOING TRAINING PROGRAM FOR THE DETROIT WASTEWATER TREATMENT PLANT. DISCUSSED ARE PROGRAM GOALS AND OBJECTIVES, TRAINING NEEDS, SCOPE OF THE TRAINING PROGRAM, PROGRAM AND EMPLOYEE EVALUATION, STAFFING, CURRICULUM DEVELOPMENT, AND THE SEWAGE PLANT OPERATOR APPRENTICE PROGRAM.

AVAILABILITY: DETROIT WATER AND SEWAGE DEPARTMENT, DETROIT, MI

IRIS ACCESSION NUMBER: EW007275

PUBLICATION DATE: OCT 80

TITLE: SECTION 404 PROGRAM STRATEGY.

DESCRIPTOR: *CLEAN WATER ACT; *DREDGING; *ENVIRONMENTAL IMPACT; *FEDERAL LEGISLATION; *LEGISLATION; *PROGRAM DESCRIPTIONS; *REGULATIONS; *RIVERS; STANDARDS; *WATER QUALITY; *WATERWAYS; WETLANDS

DESCRIPTIVE NOTE: 12P.

ABSTRACT: THIS PUBLICATION OUTLINES VARIOUS ASPECTS OF SECTION 404 OF THE CLEAN WATER ACT WHICH PERTAINS TO REGULATION OF DREDGE AND FILL OPERATIONS. DISCUSSED IN THIS DOCUMENT ARE USEPA'S POLICIES, GOALS, OBJECTIVES, AND STRATEGIES FOR MEETING ITS 404 PROGRAM RESPONSIBILITIES UNDER THE ACT.

AVAILABILITY: U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER REGULATIONS AND STANDARDS, CRITERIA AND STANDARDS DIVISION, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW007276

PUBLICATION DATE: 79

TITLE: GUIDELINES FOR CONTROLLING SOIL EROSION AND WATER POLLUTION ON LOGGING OPERATIONS IN WEST VIRGINIA.

DESCRIPTOR: *CONSERVATION; *EROSION CONTROL; *GUIDELINES; *LOGGING OPERATIONS; *MANUALS; *POLLUTION CONTROL; SEDIMENTS; *SOIL EROSION; *TIMBER INDUSTRY; *WATER POLLUTION

DESCRIPTIVE NOTE: 28P. PRICE: $1.00 PLUS $.03 PER PAGE.

ABSTRACT: THIS HANDBOOK PRESENTS GUIDELINES FOR THE USE OF THE BEST AVAILABLE AND PRACTICAL FOREST MANAGEMENT PRACTICES FOR THE CONTROL OF SOIL EROSION AND WATER POLLUTION ON LOGGING OPERATIONS. INCLUDED ARE GUIDELINES FOR TRUCK HAUL ROADS, SKID ROADS AND TRAILS, FILTER STRIPS, LANDINGS AND CONCENTRATION YARDS, SEEDING MIXTURES AND TECHNIQUES, AND PESTICIDES.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW007277

PUBLICATION DATE: FEB 80

TITLE: RECREATION AND LAND USE: THE PUBLIC BENEFITS OF CLEAN WATER.

DESCRIPTOR: *CITIZEN PARTICIPATION; CONSERVATION;

GOVERNMENT ROLE; *LAND USE; *MANUALS; PROJECT PLANNING; *PUBLIC BENEFITS; *RECREATION; *RIVERS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 43P.

ABSTRACT: THE PURPOSE OF THIS PUBLICATION IS TO PRESENT AN OVERVIEW OF THE RECREATION AND LAND USE BENEFITS EMERGING FROM WATER QUALITY IMPROVEMENTS. IT OUTLINES STEPS THAT CAN BE TAKEN BY INTERESTED CITIZENS AND PUBLIC OFFICIALS TO OBTAIN PUBLIC BENEFITS FROM COORDINATING RECREATION AND WATER CLEANUP PROGRAMS. SECTIONS INCLUDE: ENLISTING GOVERNMENT AND OTHER HELP; WATER CLEANUP, RECREATION, AND CONSERVATION OPPORTUNITIES; AND, WATER CLEANUP AND LAND USE.

AVAILABILITY: U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF ENVIRONMENTAL REVIEW, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW007300

PUBLICATION DATE: DEC 81

TITLE: INTERNATIONAL NUTRIENT CONTROL TECHNOLOGY FOR MUNICIPAL EFFLUENTS.

PERSONAL AUTHOR: BARTH, EDWIN F.; STENSEL, H. DAVID

DESCRIPTOR: *ACTIVATED SLUDGE; COSTS; DESIGN; *EFFLUENTS; *INTERNATIONAL PROGRAMS; *MUNICIPALITIES; NITRIFICATION; NITROGEN; *NUTRIENTS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; PHOSPHOROUS; *SEMINARS; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1691-1701P.

ABSTRACT: A SUMMARY ON DESIGN, PERFORMANCE, OPERATIONAL CHARACTERISTICS, AND COSTS IS PRESENTED FOR NUMEROUS FULL-SCALE PLANTS REPORTED ON IN AN INTERNATIONAL SEMINAR ON NUTRIENT CONTROL TECHNOLOGY FOR MUNICIPAL EFFLUENTS SPONSORED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA).

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N12

IRIS ACCESSION NUMBER: EW007301

PUBLICATION DATE: DEC 81

TITLE: MATERIALS BALANCE IN AERATED STATIC PILE COMPOSTING.

PERSONAL AUTHOR: SIKORA, L. J.; AND OTHERS

DESCRIPTOR: *COMPOSTING; *COSTS; *DESIGN; *EXTENDED AERATION; *MATERIAL BALANCE; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1702-1707P.

ABSTRACT: A MATERIALS BALANCE EXPERIMENT WAS CONDUCTED ON THE BELTSVILLE AERATED PILE METHOD FOR STATIC PILE WASTEWATER SLUDGE COMPOSTING TO DETERMINE WEIGHTS, VOLUMES, AND LOSSES OF INPUT AND OUTPUT MATERIALS UNDER A STEADY-STATE CONDITION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N12

IRIS ACCESSION NUMBER: EW007302

PUBLICATION DATE: DEC 81

TITLE: EXAMINATION OF PROCESS PARAMETERS AFFECTING SLUDGE DEWATERING WITH A DIAPHRAGM FILTER PRESS.

PERSONAL AUTHOR: PIETILA, KENNETH A.; JOUBERT, PAUL J.

DESCRIPTOR: *DEWATERING; *EQUIPMENT; *FILTER PRESSES; *FILTERS; *PERFORMANCE EVALUATION; PILOT TESTS; *POLYMERS; *PROCESS OPTIMATION; *RESEARCH REPORTS; *SLUDGE

DESCRIPTIVE NOTE: 1708-1716P.

ABSTRACT: THIS PAPER EXAMINES THE PROCESS PARAMETERS INFLUENCING THE PERFORMANCE OF FILTER PRESSES BASED ON PILOT TESTING. ONE OF THE KEY PARAMETERS EXAMINED WAS THE FEED SOLIDS CONCENTRATION AND ITS EFFECT ON: YIELD, CHEMICAL REQUIREMENT, CYCLE TIME, AND CAKE SOLIDS CONCENTRATION. AS A RESULT OF THE TESTING AND DATA ANALYSIS, A HIGH DEGREE OF CONFIDENCE CAN BE PUT ON THE DATA FOR SIZING FILTER PRESSES. CONTINUED TESTING ALSO INDICATES THE PROCESS FLEXIBILITY AVAILABLE WITH DIAPHRAGM FILTER PRESSES NOT PRESENT WITH CONVENTIONAL TYPE PRESSES.

AVAILABILITY: JOURNAL OF WATER POLLUTION CONTROL FEDERATION, V53 N12

IRIS ACCESSION NUMBER: EW007303

PUBLICATION DATE: DEC 81

TITLE: SEPTIC LEACHATE SURVEYS FOR LAKESIDE SEWER NEEDS EVALUATION.

PERSONAL AUTHOR: KERFOOT, WILLIAM B.; SKINNER, STUART M., JR.

DESCRIPTOR: ALGAE; *GROUNDWATER; *LEACHING; *PERFORMANCE EVALUATION; SEPTIC SYSTEMS; *SEPTIC TANKS; *SEWERS; *WASTEWATER TREATMENT; *WATER POLLUTION

DESCRIPTIVE NOTE: 1717-1725P.

ABSTRACT: A SPECIALLY DESIGNED SURVEY WAS CONDUCTED ALONG THE SHORELINES OF CRYSTAL LAKE (MI) TO EVALUATE THE FUNCTIONING OF ON-LOT SEPTIC SYSTEMS. USING A NEWLY DEVELOPED SEPTIC LEACHATE DETECTOR, A NOVEL GROUNDWATER FLOW METER, AND MATHEMATICAL TECHNIQUES FOR EVALUATING THE CONDITION OF GROUNDWATER PLUMES, THE PERFORMANCE OF SHORELINE SEPTIC ABSORPTION FIELDS WERE ANALYZED. THE OBSERVED SPATIAL DISTRIBUTION AND CHARACTERISTICS OF PLUMES

FROM INDIVIDUAL SEPTIC UNITS SUGGEST THAT FAR MORE ATTENTION SHOULD BE PAID TO GROUNDWATER FLOW PATTERNS FOR ON-LOT SYSTEM DESIGN.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N12

IRIS ACCESSION NUMBER: EW007304

PUBLICATION DATE: DEC 81

TITLE: SETTLEABILITY OF URBAN RUNOFF POLLUTION.

PERSONAL AUTHOR: WHIPPLE, WILLIAM, JR.; HUNTER, JOSEPH V.

DESCRIPTOR: *DETENTION BASINS; HEAVY METALS; *NONPOINT POLLUTION; *PARTICULATES; *RESEARCH; *RETENTION; *RUNOFF; *SETTLING; *STORMWATER; *URBAN AREAS; *WATER RESOURCES

DESCRIPTIVE NOTE: 1726-1731P.

ABSTRACT: WITH THE GROWING INTEREST IN STORMWATER MANAGEMENT, AND PARTICULARLY OF THE POSSIBILITY OF USING DETENTION BASINS FOR REMOVING PARTICULATE POLLUTION, IT IS IMPORTANT TO DETERMINE THE EFFECTIVENESS OF SUCH BASINS FOR REMOVAL OF VARIOUS POLLUTING SUBSTANCES. IN THE STUDY, SAMPLES OF URBAN RUNOFF WERE ALLOWED TO SETTLE IN A LARGE TUBE, AND THE QUANTITY OF EACH POLLUTANT SETTLING IN A GIVEN PERIOD WAS DETERMINED. RESULTS INDICATE THE PROBABLE EFFECTIVENESS OF RETENTION OF STORM WATERS IN REMOVING PARTICULATE POLLUTANTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N12

IRIS ACCESSION NUMBER: EW007305

PUBLICATION DATE: DEC 81

TITLE: ECONOMICAL AND EFFICIENT PHOSPHORUS CONTROL AT A DOMESTIC-INDUSTRIAL WASTEWATER PLANT.

PERSONAL AUTHOR: VAN DAM, DORIS

DESCRIPTOR: *ACTIVATED SLUDGE; *CASE STUDIES; *CHROMIUM; DOMESTIC WASTES; *ECONOMIC FACTORS; EVALUATION; *FACILITIES; *INDUSTRIAL WASTES; *PHOSPHORUS; *PICKLING; *TANNING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1732-1737P.

ABSTRACT: THE GRAND HAVEN, MICH., WASTEWATER PLANT WAS DESIGNED TO ACCOMODATE THE DOMESTIC WASTEWATER FROM GRAND HAVEN AND THE ADJACENT VILLAGE OF SPRING LAKE, AS WELL AS A SIZABLE CONTRIBUTION OF WASTES FROM A LOCAL CHROME AND VEGETABLE TANNING OPERATION. FIVE-YEAR OPERATING RESULTS AND COST EXPERIENCE OF PHORPHORUS CONTROL WITH THE ADDITION OF WASTE PICKLE LIQUOR TO PRIMARY SETTLING TANK INFLUENT FOLLOWED BY ACTIVATED SLUDGE TREATMENT IS SHOWN. HOW CONCENTRATED SIDE STREAMS FROM HEAT TREATMENT SUPERNATANT MUST BE CONSIDERED IN OVERALL PLANT EFFICIENCY IS ALSO DISCUSSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N12

IRIS ACCESSION NUMBER: EW007306

PUBLICATION DATE: DEC 81

TITLE: INHIBITION OF NITROGENOUS BOD AND TREATMENT PLANT PERFORMANCE EVALUATION.

PERSONAL AUTHOR: DAGUE, RICHARD E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BACTERIA; *BIOCHEMICAL OXYGEN DEMAND; *EFFLUENTS; *INHIBITION; *NITRIFICATION; NITROGEN; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1738-1741P.

ABSTRACT: REPORTS OF THE PAST 35 YEARS DEMONSTRATE THE NEED TO INHIBIT NITRIFICATION IN THE BIOCHEMICAL OXYGEN DEMAND (BOD) TEST ON SECONDARY EFFLUENTS FROM TREATMENT PLANTS ACHIEVING PARTIAL NITRIFICATION. SUCH PLANTS CONTAIN NITRIFYING BACTERIA AS A PART OF THE SUSPENDED SOLIDS IN THE EFFLUENT. THE USE OF THE STANDARD UNINHIBITED BOD TEST TO ASSESS THE PERFORMANCE OF WASTEWATER TREATMENT PLANTS HAS SERIOUS CONSEQUENCES. A PLANT ACHIEVING PARTIAL NITRIFICATION WILL SEEM TO BE DOING MORE POORLY THAN A PLANT THAT IS NOT NITRIFYING. FROM THE STANDPOINT OF TOTAL OXYGEN DEMAND SATISFIED, JUST THE OPPOSITE IS TRUE. ANOTHER SERIOUS CONSEQUENCE IS THE GENERATION OF FALSE PERFORMANCE DATA THAT ARE LATER USED BY DESIGN ENGINEERS TO SELECT AND SIZE TREATMENT SYSTEMS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N12

IRIS ACCESSION NUMBER: EW007328

PUBLICATION DATE: 81

TITLE: VACUUM SEWERAGE.

DESCRIPTOR: *ALTERNATIVE SYSTEMS; *COLLECTION SYSTEMS; *DESIGN; *INSTRUCTIONAL MATERIALS; MAINTENENCE; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SEWERS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT; *VACUUM SEWERS; *WORKSHOPS

DESCRIPTIVE NOTE: 22P.

ABSTRACT: PROVIDED IS THE CONTENT MATERIAL FOR A WORKSHOP SOLELY ON THE AIRVAC ONE-PIPE VACUUM SEWERAGE SYSTEM. TOPICS DISCUSSED INCLUDE COST EFFECTIVE APPLICATIONS, CONSTRUCTION AND OPERATING ADVANTAGES, THE MAIN FEATURES OF A VACUUM SYSTEM, SEWER AND COLLECTION STATION DESIGN, VACUUM TESTING AND SYSTEM MAINTENANCE. DESIGN EXAMPLES, PROBLEMS, AND

ADDITIONAL REFERENCES ARE PROVIDED.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007329

PUBLICATION DATE: 81

TITLE: COST EFFECTIVENESS ANALYSIS.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CASE STUDIES; *COST EFFECTIVENESS; *COSTS; *DESIGN; *ECONOMICS; *ONSITE WASTEWATER SYSTEMS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 48P.

ABSTRACT: THIS REPORT PRESENTS THE GENERAL COST-EFFECTIVENESS ANALYSIS PROCEDURES APPROPRIATE TO SMALL COMMUNAL AND ONSITE WASTEWATER TREATMENT SYSTEMS DESIGN. COST COMPONENTS OF THE ANALYSIS IS DEFINED AND THE GENERAL PROCEDURES FOR THEIR DETERMINATION OUTLINED. THREE EXAMPLES OF THE APPLICATION OF THE ANALYSIS IS PRESENTED IN A CASE STUDY.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007330

PUBLICATION DATE: 81

TITLE: NOVEL ALTERNATIVES SMALL ALTERNATIVE WASTEWATER SYSTEMS WORKSHOPS.

DESCRIPTOR: *AQUACULTURE; AQUATIC ENVIRONMENTS; *ALTERNATIVE TECHNOLOGIES; *DESIGN; *FACILITIES; MARSHES; PONDS; *SMALL WASTEWATER FLOWS; *WASTEWATER TREATMENT; *WETLANDS

DESCRIPTIVE NOTE: 16P.

ABSTRACT: THIS SECTION OUTLINES NOVEL ALTERNATIVES FOR TREATMENT OF SMALL WASTEWATER FLOWS, AND EMPHASIZES THE USE OF AQUACULTURE BASED SYSTEMS. TOPICS INCLUDE: AQUACULTURE SYSTEMS; COMBINED AQUATIC PLANTS; MEADOW-MARSH-POND AND MARSH-POND SYSTEMS; MIXED AQUACULTURE; PEAT BEDS; FISH AQUACULTURE; VASCULAR AQUATIC PLANTS; AND, EXISTING NATURAL WETLANDS.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007331

PUBLICATION DATE: 81

TITLE: SEPTAGE MANAGEMENT.

DESCRIPTOR: *CASE STUDIES; *COST EFFECTIVENESS; *COSTS; *DESIGN; *FACILITIES; MAINTENANCE; *MANAGEMENT; *ONSITE WASTEWATER SYSTEMS; *SEPTAGE; SLUDGE; *TECHNOLOGICAL ALTERNATIVES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 51P.

ABSTRACT: THIS REPORT PROVIDES AN INTRODUCTION AND COMPARATIVE DISCUSSION OF MAJOR SEPTAGE TREATMENT AND DISPOSAL ALTERNATIVES. COST EFFECTIVE COMPARISONS OF ALTERNATIVES ARE PROVIDED IN A CASE STUDY AND A MORE DETAILED DESCRIPTION OF ONE COST EFFECTIVE SOLUTION, INCLUDING CAPITAL AND OPERATION AND MAINTENANCE COST ESTIMATES, IS PRESENTED.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007334

PUBLICATION DATE: MAR 81

TITLE: SUMMARY OF STATE GUIDELINES AND REGULATIONS FOR SMALL WASTEWATER FLOWS.

DESCRIPTOR: *GUIDELINES; *LEGISLATION; *MANUALS; *ONSITE DISPOSAL; POLICIES; *REGULATIONS; SMALL WASTEWATER FLOWS; *STATE REGULATIONS; *WASTEWATER DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 60P.

ABSTRACT: THE PURPOSE OF THIS INFORMATION PACKET IS TO PROVIDE AN UPDATED LISTING OF STATE LAWS, REGULATIONS, GUIDELINES AND MANUALS THAT PERTAIN TO ONSITE WASTEWATER DISPOSAL SYSTEMS. THE LISTINGS WERE ASSEMBLED FROM THE DATA FILES OF THE SMALL WASTEWATER FLOWS CLEARINGHOUSE AND FROM QUESTIONNAIRES ADDRESSED TO WASTEWATER AGENCIES AND LAND-GRANT UNIVERSITY EXTENSION SPECIALISTS.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007336

PUBLICATION DATE: MAR 81

TITLE: FLOW REDUCTION - METHODS, ANALYSIS PROCEDURES, EXAMPLES.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CASE STUDIES; *COMMUNITIES; *COST EFFECTIVENESS; *DESIGN; *FACILITIES;

*FLOW REDUCTION; MEASUREMENT; *PROGRAM PLANNING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 91P.

ABSTRACT: THIS IS THE FIRST OF A THREE-VOLUME SERIES PERTAINING TO WASTEWATER FLOW REDUCTION ANALYSIS AND PROGRAM PLANNING. PART I OF THIS VOLUME PROVIDES BACKGROUND INFORMATION ON FLOW REDUCTION, INCLUDING ITS ROLE IN FACILITIES PLANNING, ITS RELATIONSHIP TO OTHER WATER AND WASTEWATER PROGRAMS, AND CASE EXAMPLES OF COMMUNITIES WHICH HAVE IMPLEMENTED PROGRAMS. PART II PROVIDES A STEP-BY-STEP METHODOLOGY TO SERVE AS A GUIDE IN CARRYING OUT THE FLOW REDUCTION ANALYSIS. DESCRIPTIONS OF VARIOUS FLOW REDUCTION MEASURES ARE INCLUDED ALONG WITH AN ASSESSMENT OF THEIR COST EFFECTIVENESS.

AVAILABILITY: GENERAL SERVICE ADMINISTRATION, CENTRALIZED MAILING LISTS SERVICES, BLDG. 41, DENVER RESEARCH CENTER, DENVER, CO 80225

IRIS ACCESSION NUMBER: EW007337

PUBLICATION DATE: JUN 81

TITLE: COMPOSTING PROCESSES TO STABILIZE AND DISINFECT MUNICIPAL SEWAGE SLUDGE.

DESCRIPTOR: *COSTS; *COST EFFECTIVENESS; *COMPOSTING; *DESIGN; DISINFECTION; *FACILITIES; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); SEWAGE; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 43P. MCD-79

ABSTRACT: THIS TECHNICAL BULLETIN IS INTENDED TO PROVIDE GUIDANCE FOR THE DESIGN AND OPERATION OF SEWAGE SLUDGE COMPOSTING FACILITIES. THE FOCUS IS ON THE COST-EFFECTIVE DESIGN AND OPERATION OF COMPOSTING FACILITIES, THE ADEQUATE REDUCTION OF PATHOGENS IN THE FINISHED COMPOST, AND THE ASSURANCE OF AESTHETICALLY ACCEPTABLE AND SAFE WORKING CONDITIONS FOR SITE EMPLOYEES AND NEARBY RESIDENTS. CHAPTERS INCLUDE: USE OF THE PERFORMANCE RECOMMENDATIONS; CURRENT STATUS OF CONSTRUCTION GRANTS FUNDING; PERFORMANCE RECOMMENDATIONS; BACKGROUND ON PRESENT PRACTICE IN THE UNITED STATES; AND DETAILED GUIDANCE FOR EFFECTIVE OPERATION OF COMPOSTING SYSTEMS.

AVAILABILITY: GENERAL SERVICES ADMINISTRATION, CENTRALIZED MAILING LISTS SERVICES, BLDG. 41, DENVER RESEARCH CENTER, DENVER, CO 80225

IRIS ACCESSION NUMBER: EW007338

PUBLICATION DATE: JAN 81

TITLE: NPDES COMPLIANCE EVALUATION INSPECTION MANUAL.

DESCRIPTOR: *COMPLIANCE; *EFFLUENTS; *ENFORCEMENT; *INSPECTION; *MANUALS; *MONITORING; *NPDES; PERMITS; *POLLUTION CONTROL; *REGULATIONS; *WATER QUALITY

DESCRIPTIVE NOTE: 174P. MCD-75

ABSTRACT: THIS MANUAL IS A GUIDE FOR THE PROFESSIONAL FIELD STAFF IN CARRYING OUT THEIR RESPONSIBILITIES IN FIELD SURVEILLANCE, FACILITY INSPECTION, AND ENFORCEMENT ACTIVITIES. SECTIONS INCLUDE: ADMINISTRATION, PREPARATION FOR INSPECTION, TREATMENT FACILITY REVIEW, RECORDS AND REPORTS REVIEW, COMPLIANCE SCHEDULE STATUS REVIEW, SELF-MONITORING PROGRAM REVIEW, MULTI-MEDIA INSPECTIONS, SPECIAL CONSIDERATIONS AND TECHNIQUES, FEDERAL AND STATE COOPERATION, SAFETY, ACCESS AND WARRANTS, AND COMPLIANCE INSPECTION REPORT.

AVAILABILITY: GENERAL SERVICES ADMINISTRATION, CENTRALIZED MAILING LISTS SERVICES, BLDG. 41, DENVER RESEARCH CENTER, DENVER, CO 80225

IRIS ACCESSION NUMBER: EW007339

PUBLICATION DATE: FEB 81

TITLE: GENERIC FACILITIES PLAN FOR A SMALL COMMUNITY: STABILIZATION POND AND OXIDATION DITCH.

DESCRIPTOR: *DESIGN; *FACILITIES; *GUIDES; *OXIDATION DITCHES; *PLANNING; PONDS; *SMALL COMMUNITIES; *STABILIZATION PONDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 53P. FRD-18

ABSTRACT: THIS REPORT CONTAINS A GENERIC FACILITIES PLAN AND A PROCEDURE TO IDENTIFY COMMUNITIES WITH THE POTENTIAL FOR USING THE GENERIC FACILITIES PLAN. PART I PRESENTS THE PRELIMINARY SCREENING QUESTIONS THAT THE STATE MUST ANSWER AFFIRMATIVELY PRIOR TO MAKING A FINAL DECISION ON THE GENERIC PLAN. PART II PRESENTS THE GENERIC FACILITIES PLAN WITH ALL THE TABLES AND PROPOSED FORMATS PLACED AT THE END.

AVAILABILITY: GENERAL SERVICES ADMINISTRATION, CENTRALIZED MAILING LISTS SERVICES, BLDG. 41, DENVER RESEARCH CENTER, DENVER, CO 80225

IRIS ACCESSION NUMBER: EW007340

PUBLICATION DATE: JAN 81

TITLE: CONSTRUCTION COSTS FOR MUNICIPAL WASTEWATER CONVEYANCE SYSTEMS: 1973-1979.

DESCRIPTOR: *CONSTRUCTION; *COSTS; *ECONOMIC FACTORS; *FACILITIES; *MUNICIPALITIES; PUMPING STATIONS; *SEWERS; *STATE SURVEYS; *SURVEYS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 111P. FRD-21

ABSTRACT: THIS REPORT PRESENTS THE RESULTS OF A STUDY OF THE COSTS FOR CONSTRUCTION OF MUNICIPALLY OWNED WASTEWATER COLLECTION SYSTEMS. ALL DATA ARE FROM GRAVITY SEWER SYSTEMS

INCLUDING THOSE FROM SMALL COMMUNITIES. INFORMATION ON 777 COLLECTION SYSTEM PROJECTS IS REPORTED. THE REPORT CONTAINS A DETAILED BREAKDOWN OF ALL COSTS OF VARIOUS PROJECT PHASES AND PARAMETERS.

AVAILABILITY: GENERAL SERVICES ADMINISTRATION, CENTRALIZED MAILING LISTS SERVICES, BLDG. 41, DENVER RESEARCH CENTER, DENVER, CO 80225

IRIS ACCESSION NUMBER: EW007343

PUBLICATION DATE: JUL 81

TITLE: CROPPING SYSTEMS FOR TREATMENT AND UTILIZATION OF MUNICIPAL WASTEWATER AND SLUDGE.

PERSONAL AUTHOR: ELLIS, BOYD G.; AND OTHERS

DESCRIPTOR: *AGRICULTURAL PRACTICES; HEAVY METALS; *LAND APPLICATION; *MANAGEMENT; MUNICIPALITIES; NITROGEN; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-187254

ABSTRACT: THIS RESEARCH REPORT DISCUSSES A STUDY THAT ATTEMPTED TO DEVELOP MORE EFFECTIVE CROP MANAGEMENT SYSTEMS TO REMOVE NITROGEN FROM WASTEWATER OVER A LONGER PERIOD OF TIME DURING THE GROWING SEASON. MIXED CROPPING OF CORN AND SEVERAL FORAGES WERE EVALUATED FOR THEIR NITROGEN REMOVAL EFFICIENCY AND EFFECT ON TOTAL YIELD. IN ADDITION, SLUDGE COMPATIBILITY AND METAL CONTAMINATED SLUDGE STUDIES WERE CONDUCTED TO DETERMINE THE FEASIBILITY OF APPLYING SLUDGE TO LAND WHICH IS BEING USED IN A WASTEWATER TREATMENT SYSTEM. ADDITIONAL INVESTIGATIONS EXAMINED THE EFFECTS OF APPLICATIONS OF METAL CONTAMINATED SLUDGE. RECOMMENDATIONS FOR MANAGEMENT PRACTICES FOR NITROGEN CONTROL ARE PROVIDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SYSTEM, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007344

PUBLICATION DATE: JUL 81

TITLE: WASTEWATER TREATMENT BY ROOTED AQUATIC PLANTS IN SAND AND GRAVEL TRENCHES.

PERSONAL AUTHOR: POPE, PAMELA R.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *AQUATIC PLANTS; *EFFLUENTS; INDUSTRIAL WASTES; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *TRENCHES; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: PB81-213241

ABSTRACT: A PATENTED PROCESS DEVELOPED BY THE MAX PLANCK INSTITUTE (MPI) OF WEST GERMANY TO TREAT INDUSTRIAL WASTES WAS EVALUATED AS AN ENERGY-EFFICIENT METHOD TO TREAT MUNICIPAL WASTEWATER. THE MAJOR GOAL WAS TO ACHIEVE EFFLUENTS MEETING THE U.S. FEDERAL EFFLUENT STANDARDS USING THIS NOVEL BIOLOGICAL TREATMENT PROCESS THAT REQUIRES A MINIMAL AMOUNT OF MECHANICAL EQUIPMENT AND MANPOWER FOR NORMAL OPERATION. THE MOULTON NIGUEL WATER DISTRICT (MNWD) OF LAGUNA, CALIFORNIA, CONSTRUCTED AND OPERATED AN EARTHEN TRENCH SYSTEM USING ROOTED AQUATIC PLANTS FOR THE TREATMENT OF WASTEWATER. AN 11-MONTH STUDY DEMONSTRATED THAT RAW SCREENED WASTEWATER APPLIED TO THE TRENCH SYSTEM AT A RATE NOT EXCEEDING 95 M3/D (25,000 GPD) QUALITY. SPATIAL REQUIREMENTS WERE ABOUT THE SAME AS FOR A SEPTIC TANK SYSTEM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007345

PUBLICATION DATE: MAY 81

TITLE: HIGH-LEVEL OZONE DISINFECTION OF MUNICIPAL WASTEWATER EFFLUENTS.

PERSONAL AUTHOR: STOVER, ENOS L.; AND OTHERS

DESCRIPTOR: *COSTS; *DISINFECTION; *EFFLUENTS; ENGINEERING; *FACILITIES; *MUNICIPALITIES; *OZONE; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: PB81-172272

ABSTRACT: A 20-MONTH OPERATING EXPERIMENTAL PROGRAM CONDUCTED AT MARLBOROUGH, MASSACHUSETTS, EVALUATED THE FEASIBILITY, ENGINEERING, AND ECONOMIC ASPECTS OF ACHIEVING HIGH-LEVEL EFFLUENT DISINFECTION WITH OZONE. IMPACTS OF CARRIER GAS OZONE CONCENTRATION, CARRIER GAS FLOW RATE, GAS-TO-LIQUID RATIO, AND APPLIED OZONE DOSE ON CONTACTOR TRANSFER EFFICIENCIES WITH BOTH EFFLUENT QUALITIES WERE DEFINED. WATER QUALITY, TRANSFER EFFICIENCY, AND ABSORBED OZONE CONCENTRATIONS ARE KEY FACTORS AFFECTING DISINFECTION PERFORMANCE THAT MUST BE EVALUATED FOR EFFICIENT DESIGN OF OZONE DISINFECTION SYSTEMS. GENERATOR AND CONTACTOR MONITORING OR MAPPING PROCEDURES AND RESULTS USING BOTH AIR AND OXYGEN CARRIER GASES ARE PRESENTED AS AN APPROACH FOR DETERMINING THE ECONOMICAL OZONE GENERATOR OPERATING RANGE AND OPTIMAL OZONE TRANSFER EFFICIENCY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007346

PUBLICATION DATE: MAR 81

TITLE: BIOASSAYS FOR TOXIC AND HAZARDOUS MATERIALS - TRAINING MANUAL PRINCIPLES AND PROCEDURES OF AQUATIC TOXICOLOGY.

PERSONAL AUTHOR: MEDEIROS, C.; AND OTHERS

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *BIOASSAYS; *HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; LABORATORY TECHNIQUES; *POST SECONDARY EDUCATION; *TESTS; *TOXICOLOGY; *TOXIC SUBSTANCES; *TRAINING

DESCRIPTIVE NOTE: 23P. PRICE: $1.00 PER DOCUMENT PLUS $.03 PER PAGE.

ABSTRACT: THIS MANUAL PRESENTS THE PROCEDURES WHICH ARE USED TO EVALUATE THE TOXICITY OF CHEMICAL SUBSTANCES TO AQUATIC LIFE. SECTIONS INCLUDE: STATIC TOXICITY TESTS; FLOW-THRU TOXICITY TESTS; RENEWAL TOXICITY TESTS; SELECTION OF SPECIES; PREPARATION AND ACCLIMATION OF TEST FISH; SELECTION AND PREPARATION OF EXPERIMENTAL WATER; CALCULATIONS AND REPORTING; INTERPRETATION OF TOXICITY TESTS; EVALUATION OF SAMPLE TOXICITY; LAB PROCEDURE-SCREENING TESTS; DETERMINATION OF THE 96-HOUR LC50 AND TOXICITY THRESHOLD USING THE STATIC JAR TEST; AND, CONCURRENT TESTING DURING TIME-CONSTRAINED LABORATORY EXERCISES.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD - ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007348

PUBLICATION DATE: 77

TITLE: SELF-MONITORING PROCEDURES: BASIC PARAMETERS FOR MUNICIPAL EFFLUENTS.

DESCRIPTOR: *EFFLUENTS; *EVALUATION; *INSTRUCTIONAL MATERIALS; *MEASUREMENT; *MONITORING; MUNICIPALITIES; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *TEACHING GUIDES; TESTING; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 300P. EPA 430/1-77-008; PRICE: $1.00 PER DOCUMENT PLUS $.03 PER PAGE.

ABSTRACT: THIS IS ONE OF SEVERAL SHORT-TERM COURSES DEVELOPED BY THE US ENVIRONMENTAL PROTECTION AGENCY AND ASSOCIATED EDUCATIONAL INSTITUTIONS. THIS INSTRUCTOR'S GUIDE IS INTENDED TO ASSIST OTHER TRAINING ORGANIZATIONS IN CONDUCTING TRAINING OF WASTEWATER TREATMENT PLANT PERSONNEL IN THE TESTS, MEASUREMENTS, AND REPORT PREPARATION REQUIRED FOR COMPLIANCE WITH NPDES PERMITS. PART I OF THIS MANUAL IS CONCERNED WITH ADMINISTRATIVE ASPECTS OF PLANNING, PREPARING, AND CONDUCTING THE COURSE. PART II CONTAINS COURSE CONTENT, LEARNING OBJECTIVES, AND LESSON GUIDES.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS RD., COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007349

PUBLICATION DATE: SEP 81

TITLE: HAZARDOUS WASTE FACILITIES WITH INTERIM STATUS MAY BE ENDANGERING PUBLIC HEALTH AND THE ENVIRONMENT.

DESCRIPTOR: *ENVIRONMENTAL PROTECTION AGENCY; *ENVIRONMENT; *EVALUATION; *FACILITIES; *HAZARDOUS WASTES; *INTERIM STATUS TREATMENT; *MANAGEMENT; MONITORING; *PROGRAM DESCRIPTIONS; *PUBLIC HEALTH; RECOMMENDATIONS; *REGULATIONS; *STANDARDS; *WASTE DISPOSAL; *WASTE MANAGEMENT; WASTE TREATMENT

DESCRIPTIVE NOTE: 31P.

ABSTRACT: THIS REPORT DISCUSSES PROBLEMS IN THE IMPLEMENTATION OF THE INTERIM STATUS HAZARDOUS WASTE MANAGEMENT PROGRAM. THE REPORT EXAMINED INTERIM STATUS TREATMENT, STORAGE, AND DISPOSAL FACILITIES' COMPLIANCE WITH USEPA'S REGULATIONS; THE ADEQUACY OF REQUIREMENTS UNDER THE REGULATIONS TO PROTECT PUBLIC HEALTH AND THE ENVIRONMENT; AND MONITORING AND ENFORCEMENT ACTIVITIES UNDER THE PROGRAM.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DOCUMENT HANDLING AND INFORMATION SERVICES FACILITY, P. O. BOX 6015, GAITHERSBURG, MD 20760

IRIS ACCESSION NUMBER: EW007350

PUBLICATION DATE: OCT 81

TITLE: REFORMING INTEREST PROVISIONS IN FEDERAL WATER LAWS COULD SAVE MILLIONS.

DESCRIPTOR: *COST EFFECTIVENESS; *COSTS; *ECONOMIC FACTORS; *EVALUATION; *FEDERAL GOVERNMENT; *IRRIGATION; *LEGISLATION; *POLICY; *RECOMMENDATIONS; *WATER PROJECTS; *WATER RESOURCES; *WATER USE

DESCRIPTIVE NOTE: 35P.

ABSTRACT: THIS REPORT DISCUSSES THE REPAYMENT REQUIREMENTS FOR WATER RESOURCES PROJECTS AND MEASURES THE COST TO THE FEDERAL GOVERNMENT OF PROVIDING INTEREST SUBSIDIES TO USERS OF FEDERAL WATER PROJECTS. THIS REPORT RECOMMENDS LEGISLATIVE CHANGES TO MORE FULLY RECOVER THE GOVERNMENT'S COST TO BUILD WATER PROJECTS AND SUGGESTS THAT THE CONGRESS RECONSIDER THE INTEREST-FREE SUBSIDY IN DECIDING FUTURE PROJECT AUTHORIZATIONS.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DOCUMENT HANDLING AND INFORMATION SERVICES FACILITY, P. O. BOX 6015, GAITHERSBURG, MD 20760

IRIS ACCESSION NUMBER: EW007351

PUBLICATION DATE: OCT 81

TITLE: STRONGER ENFORCEMENT NEEDED AGAINST MISUSE OF PESTICIDES.

DESCRIPTOR: *ENFORCEMENT; *ENVIRONMENTAL PROTECTION AGENCY; *LAWS; *LEGISLATION; *POLLUTION; *PERFORMANCE EVALUATION; *PESTICIDES; PROGRAM DESCRIPTIONS; *RECOMMENDATIONS; REGISTRATION; *REGULATIONS; *STATE PROGRAMS

DESCRIPTIVE NOTE: 96P.

ABSTRACT: THIS REPORT SUMMARIZES THE RESULTS OF A REVIEW OF THE USEPA AND STATE PROGRAMS TO ENFORCE PESTICIDE LAWS, AND SUGGESTS WAYS TO IMPROVE PROGRAM ACTIVITIES. EXAMINED ARE PESTICIDE ENFORCEMENT PROGRAMS, MANAGEMENT, AND PESTICIDE REGISTRATION PROGRAMS. THE REVIEW FOUND THAT STRONGER ENFORCEMENT IS NEEDED AGAINST MISUSE OF PESTICIDES.

AVAILABILITY: U. S. GENERAL ACCOUNTING OFFICE, DOCUMENT HANDLING AND INFORMATION SERVICES FACILITY, P. O. BOX 6015, GAITHERSBURG, MD 20760

IRIS ACCESSION NUMBER: EW007352

PUBLICATION DATE: 78

TITLE: A COURSE ON OPERATIONAL CONSIDERATIONS IN WASTEWATER TREATMENT PLANT DESIGN - STUDENT MANUAL.

DESCRIPTOR: *DESIGN; *FACILITIES; *INSTRUCTIONAL MATERIALS; *MODIFICATIONS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *STUDY GUIDES; UPGRADING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 325P. PRICE: $1.00 PER DOCUMENT PLUS $.03 PER PAGE.

ABSTRACT: THE MAIN PURPOSES OF THIS MANUAL ARE TO EXAMINE 14 AREAS OF CONSIDERATION FOR UPGRADING THE DESIGN OF WASTEWATER PLANT FACILITIES, AND TO SERVE AS A REFERENCE FOR ESTABLISHING CRITERIA FOR UPGRADING WASTEWATER TREATMENT PLANTS. THE MANUAL ALSO FURNISHES INFORMATION FOR MODIFYING PLANT DESIGN TO COMPENSATE FOR CURRENT ORGANIC AND HYDRAULIC OVERLOADS AND/OR TO MEET MORE STRINGENT FUTURE TREATMENT REQUIREMENTS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD - ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007354

TITLE: LOW PRESSURE SEWER SYSTEMS.

DESCRIPTOR: *DESIGN; *EQUIPMENT; *HYDRAULICS; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; PRESSURE SEWERS; PUMPS; *SEWERS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *WORKSHOPS

DESCRIPTIVE NOTE: 60P.

ABSTRACT: PRESENTED IS THE CONTEXT MATERIAL NEEDED TO DEVELOP A WORKSHOP ON THE TYPES OF EQUIPMENT AVAILABLE FOR LOW PRESSURE SEWERS AND THE HYDRAULIC METHODS USED TO DESIGN SUCH SYSTEMS.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007366

PUBLICATION DATE: JAN 82

TITLE: THE CHLORINATION QUESTION.

PERSONAL AUTHOR: HILEMAN, BETTE

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AQUATIC ENVIRONMENTS; CHEMISTRY; *CHLORINATION; *CHLORINE; *CONFERENCE REPORTS; *DRINKING WATER; *DISINFECTION; *HEALTH EFFECTS; *PUBLIC HEALTH; RESEARCH REPORTS; *WATER QUALITY

DESCRIPTIVE NOTE: 15A-18AP.

ABSTRACT: THIS ARTICLE REPORTS ON A CONFERENCE ON THE USE OF CHLORINE IN DRINKING WATER AND ITS IMPACTS. AMONG THE ISSUES REPORTED ARE: ALTERNATIVE DISINFECTANTS, HEALTH EFFECTS OF CHLORINATION, POPULATION STUDIES, COST-BENEFIT ANALYSES, ANALYTICAL MEASUREMENTS, THE CHEMISTRY OF CHLORINATION, AND AQUATIC ECOSYSTEMS.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V16 N1

IRIS ACCESSION NUMBER: EW007367

PUBLICATION DATE: JAN 82

TITLE: HUMIC SUBSTANCES.

PERSONAL AUTHOR: JOSEPHSON, JULIAN

DESCRIPTOR: *AQUATIC ENVIRONMENTS; BIOCHEMISTRY; CHEMISTRY; DRINKING WATER; *HUMIC SUBSTANCES; RESEARCH NEEDS; *RESEARCH REPORTS; *STATE-OF-THE-ART REVIEWS; *TERRESTRIAL ENVIRONMENTS; *WATER QUALITY

DESCRIPTIVE NOTE: 20A-24AP.

ABSTRACT: THIS ARTICLE EXAMINES THE CHEMISTRY AND BIOCHEMISTRY OF HUMIC SUBSTANCES. RESEARCH INVESTIGATIONS ARE REPORTED AND LEADING EXPERTS IN THE FIELD OF HUMIC MATERIALS GIVE THEIR PERCEPTIONS OF THE PROCLEMS AND FUTURE RESEARCH NEEDS. ALSO REPORTED IS THE FORMATION OF THE INTERNATIONAL HUMIC SUBSTANCES SOCIETY.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V16 N1

IRIS ACCESSION NUMBER: EW007368

PUBLICATION DATE: DEC 81

TITLE: ARE YOU AN INFORMED CONSUMER OF TRAINING?

PERSONAL AUTHOR: SIMPSON, DONALD T.

DESCRIPTOR: *CONSUMER EDUCATION; *ECONOMIC FACTORS; *EVALUATION; *GUIDES; *MANAGEMENT; *MODELS; *NEEDS ASSESSMENT; *PLANNING; *SUPERVISION; *TRAINING MATERIALS; *TRAINING PROGRAMS; *TRAINING

DESCRIPTIVE NOTE: 34-36, 40P.

ABSTRACT: THIS ARTICLE PRESENTS A BASIC PLANNING GUIDE DESIGNED TO HELP PROFESSIONAL TRAINERS EVALUATE THEIR REAL NEEDS BEFORE PURCHASING TRAINING PACKAGES. ALSO EXAMINED IS A SYSTEMATIC METHOD FOR EVALUATING TRAINING PROGRAMS AGAINST ORGANIZATIONAL NEEDS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL, V35 N12

IRIS ACCESSION NUMBER: EW007369

PUBLICATION DATE: DEC 81

TITLE: APPLYING A SYSTEMS APPROACH TO PERSONNEL ACTIVITIES.

PERSONAL AUTHOR: BYHAM, WILLIAM C.

DESCRIPTOR: *EVALUATION; *JOB ANALYSIS; *MANAGEMENT; *PERSONNEL; *SUPERVISION; *SYSTEMS ANALYSIS; *SYSTEMS APPROACH; *TRAINING; *TRAINING METHODS; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 60-63P.

ABSTRACT: THIS ARTICLE IS THE FIRST OF THREE TO EXPLORE THE ADVANTAGES OF APPLYING A SYSTEMS APPROACH TO VARIOUS TRAINING ACTIVITIES. THIS ARTICLE EXPLORES THE CONCEPT OF A SYSTEM INTERLOCKING MANY OF THE MAJOR PERSONNEL ACTIVITIES. ALL THREE ARTICLES FOCUS ON THE STEPS NECESSARY TO MAKE PROGRAMS AND SYSTEMS JOB-RELATED AND THUS ACCEPTABLE TO THE EEOC IN METHODOLOGY AND DOCUMENTATION.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL, V35 N12

IRIS ACCESSION NUMBER: EW007370

PUBLICATION DATE: DEC 81

TITLE: THE VERTEAM CIRCLE.

PERSONAL AUTHOR: METZ, EDMUND J.

DESCRIPTOR: *EMPLOYEE RELATIONS; *INDUSTRY; *MANAGEMENT; *MODELS; ORGANIZATIONS; *PLANNING; *PROBLEM SOLVING; *PRODUCTIVITY; *QUALITY CIRCLE; *SUPERVISION; *TRAINING; *TRAINING PROGRAMS; *VERTEAM CIRCLE

DESCRIPTIVE NOTE: 78-83P.

ABSTRACT: THIS ARTICLE EXAMINES A NEW PROGRAM CALLED THE QUALITY CIRCLE WHICH HAS BEEN ADOPTED BY SOME ORGANIZATIONS TO HELP MEET THE CHALLENGE OF DECLINING PRODUCTIVITY AND INCREASED EXPECTATIONS OF EMPLOYEE PARTICIPATION. SPECIFIC ATTENTION IS FOCUSED ON THE MAJOR ISSUES WHICH WILL AFFECT ORGANIZATIONS IN THE 1980'S AND THE EVOLUTIONARY ADAPTATIONS OF QUALITY CIRCLES NEEDED TO MEET THESE NEW CHALLENGES.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL, V35 N12

IRIS ACCESSION NUMBER: EW007371

PUBLICATION DATE: JAN 82

TITLE: ASSESSING TRAINING RESULTS: IT'S TIME TO TAKE THE PLUNGE!

PERSONAL AUTHOR: ZENGER, JOHN H.; HARGIS, KENNETH

DESCRIPTOR: *ASSESSMENT; *EVALUATION; *MANAGEMENT; *POST SECONDARY EDUCATION; *PROGRAM EVALUATION; *RESEARCH NEEDS; *STATE-OF-THE-ART REVIEWS; *SUPERVISION; *TRAINING; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 10-16P.

ABSTRACT: THIS ARTICLE PRESENTS A STATE-OF-THE-ART REVIEW OF TRAINING EVALUATION RESEARCH. A SUMMARY OF RESEARCH IN A VARIETY OF ORGANIZATIONAL SETTINGS IS PRESENTED ALONG WITH GUIDELINES AND CRITERIA FOR GOOD EVALUATION. A CONCLUSION IS REACHED WHICH CALLS FOR GREATER INVOLVEMENT IN EVALUATION RESEARCH BOTH BY TRAINING SUPERVISORS AND RESEARCHERS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL, V36 N1

IRIS ACCESSION NUMBER: EW007372

PUBLICATION DATE: JAN 82

TITLE: SIMULATION: BALANCING THE PROS AND CONS.

PERSONAL AUTHOR: WADDELL, GENEVA

DESCRIPTOR: *EVALUATION; EVALUATION CRITERIA; GAMES; *MANAGEMENT; *MANAGEMENT GAMES; *POST SECONDARY EDUCATION; *SIMULATION; *SUPERVISION; *TRAINING; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 80-82P.

ABSTRACT: THIS ARTICLE CRITICALLY EXAMINES THE USE OF SIMULATION IN THE TRAINING OF SUPERVISORS AND MANAGERS. THE PROS AND CONS AND THE VARIABLES ASSOCIATED WITH THE USE OF SIMULATIONS OR GAMES ARE DISCUSSED. ALSO INCLUDED IS A CHECKLIST FOR DESIGNING SIMULATIONS AND A LIST OF CRITERIA FOR EVALUATING SIMULATIONS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL, V36 N1

IRIS ACCESSION NUMBER: EW007373

PUBLICATION DATE: JAN 82

TITLE: COST-EFFECTIVENESS ANALYSIS FOR ON-SITE WASTEWATER TREATMENT ALTERNATIVES.

PERSONAL AUTHOR: KLINK, ROBERT E.; PIRRUNG, DONALD F.

DESCRIPTOR: *COST EFFECTIVENESS; COSTS; *DESIGN; *ECONOMIC FACTORS; FACILITIES; *MAINTENANCE; *ONSITE SYSTEMS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 51-54P.

ABSTRACT: THIS ARTICLE PRESENTS AN EXAMINATION OF THE COSTS ASSOCIATED WITH ALTERNATIVE TREATMENT FACILITIES WHERE SOIL CONDITIONS ARE UNSUITABLE FOR SEPTIC SYSTEMS. VARIOUS ALTERNATIVE WASTEWATER SYSTEMS ARE EXAMINED IN TERMS OF CAPITAL AND OPERATIONS AND MAINTENANCE COSTS.

AVAILABILITY: PUBLIC WORKS, V113 N1

IRIS ACCESSION NUMBER: EW007374

PUBLICATION DATE: JAN 82

TITLE: WATERBORNE GIARDIASIS--AN OVERVIEW.

PERSONAL AUTHOR: GERARDI, MICHAEL H.

DESCRIPTOR: *CONTAMINATION; *DISEASES; *DRINKING WATER; FILTRATION; *GIARDIASIS; MICROBIOLOGY; POTABLE WATER; *PUBLIC HEALTH; SAMPLING; UNITED STATES *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 60-63P.

ABSTRACT: THIS ARTICLE PRESENTS AN OVERVIEW OF GIARDIASIS, AN INTESTINAL DISEASE CAUSED BY THE FLAGELLATED PROTOZOAN GIARDIA LAMBLIA. INFORMATION IS PRESENTED ON THE LIFE CYCLE OF THE ORGANISM, DIAGNOSIS AND SAMPLING, SYMPTOMS OF GIARDIASIS, WATER SYSTEM DEFICIENCIES RESPONSIBLE FOR OUTBREAKS OF GIARIASIS IN THE UNITED STATES, AND METHODS OF ORGANISM REMOVAL.

AVAILABILITY: PUBLIC WORKS, V113 N1

IRIS ACCESSION NUMBER: EW007376

PUBLICATION DATE: 81

TITLE: METHODS FOR ECOLOGICAL TOXICOLOGY - A CRITICAL REVIEW OF LABORATORY MULTISPECIES TESTS.

PERSONAL AUTHOR: HAMMONS, ANNA S.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CHEMISTRY; *ECOLOGY; *EVALUATION; *HAZARDOUS MATERIALS; *LABORATORY PROCEDURES; MATHEMATICAL MODELS; MEASUREMENT; *RECOMMENDATIONS; *RESEARCH; *TESTING; *TOXICOLOGY

DESCRIPTIVE NOTE: 307P. PRICE: $29.95

ABSTRACT: THIS REPORT CRITICALLY EVALUATES SELECTED LABORATORY METHODS FOR MEASURING ECOLOGICAL EFFECTS AND RECOMMENDS TESTS CONSIDERED MOST SUITABLE FOR RESEARCH AND DEVELOPMENT FOR USE IN PREDICTING THE EFFECTS OF CHEMICAL SUBSTANCES ON INTERSPECIFIC INTERACTIONS AND ECOSYSTEM PROPERTIES. THE ROLE OF MATHEMATICAL MODELS IN CHEMICAL HAZARD ASSESSMENT IS ALSO DISCUSSED. ABOUT 450 REFERENCES ARE CITED. A BIBLIOGRAPHY OF MORE THAN 700 REFERENCES IS PROVIDED.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007377

PUBLICATION DATE: 81

TITLE: SOLID WASTE TRANSFER FUNDAMENTALS.

PERSONAL AUTHOR: BROWN, MICHAEL D.; AND OTHERS

DESCRIPTOR: *EQUIPMENT; FACILITIES; *INSTRUCTIONAL MATERIALS; MANUALS; *OPERATIONS; RECYCLING; *RESOURCE RECOVERY; *SOLID WASTES; *TRANSPORTATION; WASTE DISPOSAL; *WASTE HANDLING

DESCRIPTIVE NOTE: 69P. PRICE $39.95

ABSTRACT: THIS MANUAL IS INTENDED TO ACQUAINT THE READER WITH THE FUNDAMENTALS OF SOLID WASTE TRANSFER -- THE CONSOLIDATION OF REFUSE COLLECTED BY A NUMBER OF SMALL VEHICLES INTO LARGE VOLUME TRAILERS FOR EFFICIENT TRANSPORTATION. CHAPTERS INCLUDE: WHY TRANSFER?; DEVELOPING BASIC INFORMATION; TRANSFER STATION TYPES; FAMILIARIZATION WITH THE EQUIPMENT; OPERATION; RECYCLING AND RESOURCE RECOVERY; IMPLEMENTATION; AND, A CASE STUDY.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007378

PUBLICATION DATE: 77

TITLE: TRACE METALS IN THE ENVIRONMENT, VOLUME 2-SILVER.

PERSONAL AUTHOR: SMITH, IVAN C.; CARSON, BONNIE L.

DESCRIPTOR: *EPIDEMIOLOGY; GEOLOGY; *HEALTH EFFECTS; *INDUSTRIAL WASTES; *METALS; *POLLUTION CONTROL; *RESEARCH REPORTS; *SILVER; SLUDGE; *TOXICOLOGY; TOXIC SUBSTANCES; *TRACE METALS; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 469P. PRICE: $29.50

ABSTRACT: THIS STUDY EXAMINES SILVER CONTAMINATION IN THE ENVIRONMENT AND INCLUDES IN-DEPTH DISCUSSIONS ON DISTRIBUTION LEVELS, NATURAL AND MAN-MADE SOURCES, USES AND DISPOSAL PRACTICES, AND PHYSIOLOGICAL EFFECTS OF SILVER AND ITS COMPOUNDS. THIS REPORT IS INTENDED FOR USE BY GEOLOGISTS, CHEMISTS, EPIDEMIOLOGISTS, TOXICOLOGISTS, BIOLOGISTS, AND INDUSTRIAL AND POLLUTION CONTROL ENGINEERS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007380

PUBLICATION DATE: 77

TITLE: BIOCHEMICAL EFFECTS OF ENVIRONMENTAL POLLUTANTS.

PERSONAL AUTHOR: LEE, S. D.

DESCRIPTOR: *BIOCHEMISTRY; *ENVIRONMENT; *HEALTH EFFECTS; HEAVY METALS; LUNGS; OZONE; *POLLUTANTS; *RESEARCH REPORTS; *SYMPOSIA; *TOXICOLOGY; TRACE METALS

DESCRIPTIVE NOTE: 478P. PRICE: $39.95

ABSTRACT: THIS BOOK CONTAINS PAPERS PRESENTED AT A SYMPOSIUM THAT WAS ORGANIZED TO EMPHASIZE THE VALUE OF UNDERSTANDING THE BIOCHEMICAL EFFECTS OF ENVIRONMENTAL POLLUTANTS. TRACE METAL AND OXIDANT POLLUTANT TOXICOLOGY ARE PRIMARILY ADDRESSED. OTHER TOPICS EXAMINED ARE OZONE, POLLUTANT DAMAGE TO LUNGS, CELLULAR REACTIONS, AND SULFUR DIOXIDE.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007382

PUBLICATION DATE: 81

TITLE: BIOGAS - PRODUCTION & UTILIZATION.

PERSONAL AUTHOR: PRICE, ELIZABETH C.; CHEREMISINOFF, PAUL N.

DESCRIPTOR: *ANAEROBIC DIGESTION; *BIOGAS; DECOMPOSITION; DESIGN; DIGESTERS; *INSTRUCTIONAL MATERIALS; *METHANE; MICROBIOLOGY; *ORGANIC WASTES; *POST SECONDARY EDUCATION; *SLUDGE; SLUDGE TREATMENT; SOLID WASTES; *WASTE TREATMENT

DESCRIPTIVE NOTE: 146P. PRICE: $29.95

ABSTRACT: THE TOPIC OF THIS BOOK IS THE DECOMPOSITION OF ORGANIC WASTES WHICH CAN PRODUCE GASES WHOSE MAJOR CONSTITUENT IS METHANE. THE PURPOSE OF THIS BOOK IS TO ESTABLISH AN OVERVIEW OF RECOVERY PROCESSES WHICH ULTIMATELY DEPEND ON BIOLOGICAL ACTIVITY. CHAPTERS INCLUDE: MICROBIOLOGY AND BIOCHEMISTRY; FACTORS AFFECTING THE ANAEROBIC PROCESS; DENITRIFICATION; PROCESS KINETICS; APPLICATIONS; ANAEROBIC DIGESTER DESIGN; OFFGAS MEASUREMENT OF ANAEROBIC DIGESTERS; AND, SLUDGE TREATMENT -- SOIL CONDITIONING AND COMPOSTING.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007386

PUBLICATION DATE: 81

TITLE: HANDBOOK OF VARIABLES FOR ENVIRONMENTAL IMPACT ASSESSMENT.

PERSONAL AUTHOR: CANTER, LARRY W.; HILL, LOREN G.

DESCRIPTOR: AIR QUALITY; *ASSESSMENT; AQUATIC ENVIRONMENTS; *ECOLOGICAL FACTORS; *ENVIRONMENTAL IMPACT STATEMENTS; EVALUATION; *HANDBOOKS; *INSTRUCTIONAL MATERIALS; LAND MANAGEMENT; PLANNING; *POST SECONDARY EDUCATION; *PROJECT EVALUATION; TERRESTRIAL ENVIRONMENTS; WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: 203P. PRICE: $29.95

ABSTRACT: THE OBJECTIVE OF THIS HANDBOOK IS TO PRESENT A COMPREHENSIVE LIST OF VARIABLES FOR ADDRESSING THE PHYSICAL-CHEMICAL, BIOLOGICAL AND ESTHETIC FEATURES OF THE ENVIRONMENT. THE VARIABLES ARE ORGANIZED ACCORDING TO THE EQ ACCOUNT FOR WATER RESOURCES PROJECTS. USE OF THE VARIABLES IN THIS HANDBOOK WILL ENABLE A SYSTEMATIC CONSIDERATION AND EVALUATION OF THE ENVIRONMENTAL CONSEQUENCES OF PROJECT DEVELOPMENT AND OPERATION. VARIABLES ARE GROUPED INTO THE FOLLOWING CATEGORIES: TERRESTRIAL, AQUATIC, AIR, AND HUMAN INTERFACE.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007387

PUBLICATION DATE: 81

TITLE: POWER PLANT CHLORINATION - A BIOLOGICAL AND CHEMICAL ASSESSMENT.

PERSONAL AUTHOR: HALL, LENWOOK W., JR.; AND OTHERS

DESCRIPTOR: AQUATIC ENVIRONMENTS; BIFOULING; *BIOLOGICAL FOULING; CHEMISTRY; *CHLORINATION; *CHLORINE; ECOLOGICAL FACTORS; EFFLUENTS; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *POWER PLANTS; RESEARCH REPORTS; *TOXICITY; TOXICOLOGY; *WATER QUALITY

DESCRIPTIVE NOTE: 237P. PRICE: $39.95

ABSTRACT: THE OBJECTIVES OF THIS BOOK WERE TO COLLECT, SYNTHESIZE AND CRITICALLY REVIEW CHLORINE DATA RELATED TO BIOFOULING CONTROL IN THERMOELECTRIC POWER PLANTS. MAJOR AREAS INVESTIGATED WERE THE CHEMISTRY OF CHLORINE IN FRESH-ESTUARINE AND MARINE WATERS; THE TOXICITY OF CHLORINE AND CHLORINE-INDUCED OXIDANTS TO AQUATIC BIOTA; AND THE EFFECTS OF CHLORINE AT POPULATION, COMMUNITY AND ECOSYSTEM LEVELS. THE PRIMARY OBJECTIVE WAS TO IDENTIFY DEFICIENCIES IN AVAILABLE INFORMATION AND ONGOING RESEARCH PROGRAMS IN ORDER TO RECOMMEND FUTURE RESEARCH ON THE ECOLOGICAL EFFECTS OF POWER PLANT COOLING WATER CHLORINATION.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007388

PUBLICATION DATE: 80

TITLE: MARINE AND SHORELAND RESOURCES MANAGEMENT.

PERSONAL AUTHOR: HEIKOFF, JOSEPH M.

DESCRIPTOR: *CASE STUDIES; *COASTAL ZONES; *INSTRUCTIONAL MATERIALS; LAND MANAGEMENT; *LAND USE; LOCAL GOVERNMENT; *MANAGEMENT; *MARINE ENVIRONMENT; NATURAL RESOURCES; *OCEANOGRAPHY; PLANNING; *PROGRAM DESCRIPTIONS; SHORELINES; STATE GOVERNMENT; *STATE PROGRAMS; WATER QUALITY; WETLANDS

DESCRIPTIVE NOTE: 214P. PRICE: $23.95

ABSTRACT: THE OBJECTIVE OF THIS BOOK IS TO INTRODUCE STUDENTS AND THE PUBLIC TO SOME OF THE MAJOR COASTAL MANAGEMENT PROGRAMS OF STATE AND LOCAL GOVERNMENTS. CHAPTERS INCLUDE: THE FEDERAL COASTLINE MANAGEMENT PROGRAM; COASTAL LAND USE REGULATION; MANAGEMENT OF SHORE EROSION AND FLOOD HAZARDS; SHELLFISH MANAGEMENT; WETLANDS MANAGEMENT; RECREATION AND ACCESS TO THE SHORE; WATER QUALITY MANAGEMENT; ENERGY PRODUCTION; AND, THE NEW YORK STATE APPROACH TO COASTAL PROGRAM DEVELOPMENT.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007393

PUBLICATION DATE: 79

TITLE: ASSESSING TOXIC EFFECTS OF ENVIRONMENTAL POLLUTANTS.

PERSONAL AUTHOR: LEE, S. D.; MUDD, J. BRIAN

DESCRIPTOR: ANIMALS; BIOCHEMISTRY; *CHEMICALS; *ENVIRONMENTAL RESEARCH; *HEALTH EFFECTS; *INSTRUCTIONAL MATERIALS; LABORATORY TESTING; *POLLUTANTS; *POST SECONDARY EDUCATION; *RESEARCH REPORTS; *TOXICITY; *TOXIC SUBSTANCES; *TOXICOLOGY

DESCRIPTIVE NOTE: 306P. PRICE: $39.95

ABSTRACT: THIS BOOK INTRODUCES MATERIAL OF INTEREST TO PEOPLE OF MANY DISCIPLINES OF CHEMISTRY AND BIOLOGY WHO ARE CONCERNED WITH DELETERIOUS CHEMICALS IN THE ENVIRONMENT. THE EMPHASIS IS ON HUMAN HEALTH, COVERING RESEARCH WITH HUMAN SUBJECTS AND NONHUMAN PRIMATES, AND DISCUSSING THE DIFFICULTIES OF ASSESSING HUMAN TOXICITY ON THE BASIS OF TESTS USING LABORATORY ANIMALS. WHILE REVIEWING PROGRESS IN THESE AREAS OF TOXICOLOGY, NEW AND SPECIFIC RESEARCH DATA ARE PRESENTED.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007397

PUBLICATION DATE: 76

TITLE: PHYSICAL AND CHEMICAL CHARACTERISTICS OF AQUATIC HUMUS.

PERSONAL AUTHOR: GJESSING, EGIL T.

DESCRIPTOR: ANALYTICAL TECHNIQUES; *AQUATIC HUMUS; *AQUATIC ENVIRONMENTS; *BIOCHEMISTRY; CHEMISTRY; *HUMUS; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *RESEARCH REPORTS; SOILS; *WATER RESOURCES

DESCRIPTIVE NOTE: 120P. PRICE: $20.00

ABSTRACT: THE PURPOSE OF THIS BOOK IS TO REVIEW THE RESEARCH ON AQUATIC HUMUS DONE AT THE NORWEGIAN INSTITUTE FOR WATER RESEARCH SINCE 1962. CHAPTERS INCLUDE: ORIGIN, FORMATION, AND DISTRIBUTION OF HUMUS; NATURAL CHANGES; QUANTITATIVE AND QUALITATIVE ANALYTICAL METHODS; CHEMICAL COMPOSITION; PROPERTIES AND CHARACTERISTICS; AND, METHODS FOR THE REMOVAL OF HUMUS FROM WATER.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007407

PUBLICATION DATE: 76

TITLE: ORGANIC ANALYSES FOR PERMIT COMPLIANCE - TRAINING MANUAL.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; *CHEMISTRY; *COMPLIANCE; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; MANUALS; *ORGANIC COMPOUNDS; *ORGANIC POLLUTANTS; POLLUTANTS; *POST SECONDARY EDUCATION; *PERMIT COMPLIANCE; *PERMITS; TRAINING; *WATER QUALITY

DESCRIPTIVE NOTE: 133P. PRICE: $1.00 PER DOCUMENT PLUS $.03 PER PAGE.

ABSTRACT: THIS TRAINING MANUAL IS DESIGNED FOR A COURSE FOR CHEMISTS OR TECHNICIANS WHO WILL PERFORM CHEMICAL ANALYSES FOR ORGANIC WATER POLLUTANTS. PRESENTED ARE THE THEORETICAL CONCEPTS AND LABORATORY EXERCISES PERTAINING TO THE FOLLOWING: FIVE-DAY BIOCHEMICAL OXYGEN DEMAND; DISSOLVED OXYGEN; CHEMICAL OXYGEN DEMAND; TOTAL ORGANIC CARBON; OIL AND GREASE; SURFACTANTS; TOTAL KJELDAHL AND ORGANIC NITROGEN; PHENOL; POLYCHLORINATED BIPHENYLS; AND PESTICIDES.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW007408

PUBLICATION DATE: 77

TITLE: THE CLEAN WATER ACT SHOWING CHANGES MADE BY THE 1977

AMENDMENTS.

DESCRIPTOR: *CLEAN WATER ACT; ENFORCEMENT; *FEDERAL GOVERNMENT; *FEDERAL LEGISLATION; *GUIDELINES; *LAWS; *REGULATIONS; *STANDARDS; *WATER RESOURCES; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 125P.

ABSTRACT: PRESENTED IS A PARTIAL TEXT OF THE FEDERAL WATER POLLUTION CONTROL ACT (P.L. 92-500) AS AMENDED BY THE CLEAN WATER ACT OF 1977 (P.L. 95-217). NOT ALL OF THE PROVISIONS OF PUBLIC LAW 95-217 OR PUBLIC LAW 92-500 ARE SET FORTH IN THIS DOCUMENT. SECTIONS 3, 29(B), 54(C)(2), 58(H), 58(J) AND 73-78 OF THE CLEAN WATER ACT OF 1977 (P.L. 95-217) ARE NOT INCLUDED IN THIS DOCUMENT. ALSO, SINCE NOT ALL OF THE PROVISIONS OF P.L. 92-500 ARE TECHNICALLY PART OF THE FEDERAL WATER POLLUTION CONTROL ACT, ONLY SECTION 2 OF P.L. 82-500 IS SET FORTH IN THIS DOCUMENT. SECTIONS 3-13 OF P.L. 92-500 HAVE BEEN OMITTED. THE DOCUMENT IS DIVIDED INTO FIVE SECTIONS: RESEARCH AND RELATED PROGRAMS, GRANTS FOR CONSTRUCTION OF TREATMENT WORKS, STANDARDS & ENFORCEMENT, PERMITS AND LICENSES, AND GENERAL PROVISIONS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007409

PUBLICATION DATE: APR 74

TITLE: GENERAL PLAN TO DETERMINE A CURRICULUM FOR A BACHELOR OF TECHNOLOGY IN DESIGN, OPERATION AND MAINTENANCE OF WASTEWATER TREATMENT PLANTS.

DESCRIPTOR: *COURSE DESCRIPTIONS; *CURRICULUM; DESIGN; *HIGHER EDUCATION; *INSTRUCTION; MAINTENANCE; MANAGEMENT; *OPERATIONS (WASTEWATER); *PROGRAM DESCRIPTIONS; TECHNOLOGY; *UNDERGRADUATE STUDY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 77P.

ABSTRACT: THIS PUBLICATION PRESENTS COURSE DESCRIPTIONS, CURRICULUM DEVELOPMENT, AND QUALIFICATIONS FOR GRADUATION FOR A FOUR-YEAR WASTEWATER TECHNOLOGIST TRAINING PROGRAM. THE PROGRAM DESCRIBED COULD BE APPLIED TO THE DEVELOPMENT OF CURRICULA FOR A VARIETY OF ENVIRONMENTAL PERSONNEL, TECHNICIANS, SCIENTISTS, ENGINEERS, AND OTHER PROFESSIONALS.

AVAILABILITY: DEPARTMENT OF ENVIRONMENTAL SYSTEMS ENGINEERING, CLEMSON UNIVERSITY, CLEMSON, SC 29631

IRIS ACCESSION NUMBER: EW007410

PUBLICATION DATE: OCT 81

TITLE: HAZARDS OF PAST LOW-LEVEL RADIOACTIVE WASTE OCEAN DUMPING HAVE BEEN OVEREMPHASIZED.

DESCRIPTOR: *ENVIRONMENTAL IMPACTS; *EVALUATION; *HAZARDOUS MATERIALS; *OCEAN DUMPING; OCEANS; POLICY; *PUBLIC HEALTH; *POLLUTION; *RADIOACTIVE WASTES; *RECOMMENDATIONS; *REGULATIONS; *WASTE DISPOSAL; *WATER QUALITY

DESCRIPTIVE NOTE: 27P.

ABSTRACT: THIS REPORT DISCUSSES THE RESULTS OF AN EVALUATION OF THE ENVIRONMENTAL AND PUBLIC HEALTH CONSEQUENCES OF PAST OCEAN DUMPING OF LOW-LEVEL RADIOACTIVE WASTE. THE REPORT EXAMINES FEDERAL EFFORTS TO (1) IDENTIFY THE EXTENT OF PAST OCEAN DUMPING, (2) ASSURE THAT IT POSES NEITHER AN ENVIRONMENTAL NOR PUBLIC HEALTH HAZARD, AND (3) INSURE THAT ANY POSSIBLE FUTURE DUMPING IS CONDUCTED SAFELY AND IN AN ENVIRONMENTALLY ACCEPTABLE MANNER.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DOCUMENT HANDLING AND INFORMATION SERVICES FACILITY, P. O. BOX 6015, GAITHERSBURG, MD 20760

IRIS ACCESSION NUMBER: EW007411

PUBLICATION DATE: MAY 81

TITLE: PROCEDURES FOR HANDLING AND CHEMICAL ANALYSIS OF SEDIMENT AND WATER SAMPLES.

PERSONAL AUTHOR: PLUMB, RUSSELL H., JR.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; *FEDERAL LEGISLATION; *GUIDELINES; *LABORATORY PROCEDURES; *OPERATIONS (DREDGING); *OPERATIONS (FILLING); REGULATIONS; *SAMPLING; SAMPLING TECHNIQUES; *SEDIMENTS; *WATER POLLUTION CONTROL; WATER QUALITY

DESCRIPTIVE NOTE: 501P. AD-A103 788/6

ABSTRACT: PRESENTED IS A STATE-OF-THE-ART HANDBOOK ON THE SUBJECTS OF SAMPLING, PRESERVATION AND ANALYSIS OF DREDGED AND FILL MATERIAL. THE MANUAL IS DESIGNED FOR USE AS AN AID IN THE REGULATORY PROCESS, SPECIFICALLY THE INTERPRETATION OF SECTION 404(B) OF PUBLIC LAW 92-500 (FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972) WHICH REQUIRES AN ECOLOGICAL EVALUATION OF PROPOSED DREDGING AND FILLING OPERATIONS AS THEY MAY IMPACT NAVIGABLE WATERS OF THE UNITED STATES. THE GUIDANCE PRESENTED SHOULD BE VIEWED AS SECOND GENERATION INTERIM GUIDANCE IN THE CONTINUING PROCESS OF PROCEDURE DEVELOPMENT, REFINEMENT AND EVALUATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007415

PUBLICATION DATE: AUG 78

TITLE: WATER AND WASTEWATER CHEMISTRY.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CHEMICAL ANALYSIS; *CHEMICAL REACTIONS; *CHEMISTRY; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *WATER TREATMENT; *WASTEWATER;

*WASTEWATER TREATMENT; WATER POLLUTION CONTROL; *WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: 24P. PRICE: $3.00

ABSTRACT: PRESENTED IS A COMPILATION OF A SERIES OF ARTICLES FROM A TEXT ON WATER AND WASTEWATER CHEMISTRY. PART I COVERS APPLICABLE NATURAL LAWS, SYMBOLOGY, TERMINOLOGY, AND THE MATHEMATICS NEEDED FOR CHEMISTRY. PART II DESCRIBES STOICHIMETRIC RELATIONSHIPS, THE SPECIAL PROPERTIES OF WATER AND WASTEWATER AND THE CHEMICAL REACTIONS INVOLVED IN TREATMENT. PART III DISCUSSES SOFTENING, CORROSION CONTROL, AND ANALYTICAL TECHNIQUES.

AVAILABILITY: PUBLIC WORKS MAGAZINE, P. O. BOX 688, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW007418

TITLE: ETERNAL WATER.

DESCRIPTOR: *AUDIOVISUAL AIDS; *CONSERVATION (ENVIRONMENT); *CONSERVATION EDUCATION; *FILMS; *INSTRUCTIONAL MATERIALS; IRRIGATION; *LAWS; *MANAGEMENT; *POST SECONDARY EDUCATION; *RECYCLING; *WATER CONSERVATION; WATER POLLUTION CONTROL; *WATER RESOURCES; WATER RIGHTS

DESCRIPTIVE NOTE: 16MM MP/28 MINUTES/COLOR/OPTICAL SOUND.

ABSTRACT: ADDRESSED IN THIS FILM IS THE SUBJECT OF WATER MANAGEMENT INCLUDING THE HISTORY OF WATER RIGHTS IN THE UNITED STATES AND THE NEED FOR MORE EFFICIENT USES OF WATER RESOURCES. ALSO DESCRIBED ARE WATER CONSERVATION METHODS INCLUDING RECYCLING WASTEWATER, BETTER IRRIGATION SYSTEMS, AND POLLUTION CONTROL.

AVAILABILITY: MAR CHUCK FILM INDUSTRIES, INC., P.O. BOX 61, MT. PROSPECT, IL 60056

IRIS ACCESSION NUMBER: EW007419

PUBLICATION DATE: 81

TITLE: ANAEROBIC TREATMENT MANUAL.

DESCRIPTOR: *ANAEROBIC DIGESTION; *ANAEROBIC PROCESSES; *CONFERENCE REPORTS; DESIGN; *ENERGY CONSERVATION; INDUSTRY; MUNICIPALITIES; *OPERATIONS (WASTEWATER); *PROCESS CONTROL; *UTILITIES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 300P. PRICE: $100.00

ABSTRACT: PRESENTED ARE THE PROCEEDINGS OF THE 1981 INTERNATIONAL SEMINAR ON ANAEROBIC WASTEWATER TREATMENT AND ENERGY RECOVERY. INVITED AUTHORITIES LECTURED ON: TOXICITY AND ACCLIMATION; NUTRIENTS AND ALKALINITY REQUIREMENTS; EXCESS SLUDGE PRODUCTION; TEMPERATURE EFFECTS; TREATABILITY STUDIES; SCALE-UP; AND DESIGN PROCEDURES. VARIOUS PROCESS MODIFICATIONS WERE POSITIONED. ENERGY RECOVERY AND CONVERSION PRACTICES AND THEIR FULL SCALE INDUSTRIAL APPLICATIONS ARE DISCUSSED. START-UP AND OPERATIONAL PROCEDURES ARE GIVEN FOR INDUSTRIAL AND MUNICIPAL DIGESTERS.

AVAILABILITY: DUNCAN, LAGNESE & ASSOCIATES, INC., 3185 BABCOCK BLVD., PITTSBURG, PA 15237, ATTN: ANAEROBIC SEMINAR

IRIS ACCESSION NUMBER: EW007420

TITLE: NATURAL SYSTEMS FOR WATER POLLUTION CONTROL.

PERSONAL AUTHOR: DINGES, RAY

DESCRIPTOR: *ALTERNATIVE SYSTEMS; BIOLOGY; DRINKING WATER; *ECOLOGY; ENVIRONMENTAL PROBLEMS; *NATURAL SYSTEMS; *POLLUTION; *RECYCLING; *STABILIZATION PONDS; *WATER RESOURCES; WASTES; *WASTEWATER TREATMENT; *WATER TREATMENT; *WETLANDS

DESCRIPTIVE NOTE: 264P. PRICE: $22.50

ABSTRACT: PRESENTED ARE LOW-COST ALTERNATIVES TO ENGINEERED SOLUTIONS OF ENVIRONMENTAL PROBLEMS. A WIDE VARIETY OF NATURAL SYSTEMS THAT COMPLETELY UPGRADE WATER OR RENOVATE WASTEWATER THAT HAS UNDERGONE PRELIMINARY TREATMENT ARE EXAMINED. THESE SYSTEMS INCLUDE WETLANDS, FLOATING PLANTS, AND STABILIZATION PONDS. INFORMATION ON INTEGRATING FRESHWATER AND MARINE TREATMENT SYSTEMS, RECYCLING ORGANIC WASTES AND RETURNING MINERAL NUTRIENTS TO THE SOIL, AND IMPLEMENTING LARGE-SCALE INTEGRATED WASTE RENOVATION AND POWER GENERATION CENTERS ARE INCLUDED.

AVAILABILITY: VAN NOSTRAND REINHOLD, 7625 EMPIRE DRIVE, FLORENCE, KY 41042

IRIS ACCESSION NUMBER: EW007421

TITLE: ENVIRONMENTAL RISK ANALYSIS FOR CHEMICALS.

PERSONAL AUTHOR: CONWAY, RICHARD A.

DESCRIPTOR: *CHEMICALS; ENVIRONMENT; *ENVIRONMENTAL ASSESSMENT; *ENVIRONMENTAL IMPACT; *HAZARDOUS MATERIALS; *INDUSTRY; *MODELS; PESTICIDES; *RISK ANALYSIS; *WASTE DISPOSAL; *WASTES

DESCRIPTIVE NOTE: 538P. PRICE: $37.50

ABSTRACT: DISCUSSED ARE METHODS FOR ANALYZING THE HAZARDS OF INDUSTRIAL SUBSTANCES. PROCEDURES ARE DETAILED FOR CONDUCTING FATE ANALYSIS IN SOILS; MATHEMATICALLY MODELING THE TRANSPORT AND TRANSFORMATION OF DANGEROUS MATERIALS; AND DESIGNING AND USING MICROCOSMS AND MODEL ECOSYSTEMS. INFORMATION ON WASTE AND SITE SPECIFIC-STUDIES FOR SETTING LIMITS ON SOIL POLLUTANT LEVELS AND DESCRIPTIONS OF NON-LINEAR REGRESSION MODELS, DEVELOPED UNDER USEPA AUSPICES, FOR PREDICTING BIOACCUMULATION AND OTHER ECOSYSTEM EFFECTS FOR KEPONE, ENDRIN, AND TEXTILE EFFLUENTS ARE PROVIDED.

AVAILABILITY: VAN NOSTRAND REINHOLD, 7625 EMPIRE DRIVE, FLORENCE, KY 41042

IRIS ACCESSION NUMBER: EW007422

PUBLICATION DATE: 81

TITLE: MODELS FOR WATER QUALITY MANAGEMENT.

PERSONAL AUTHOR: BISWAS, ASIT K.

DESCRIPTOR: *ESTUARIES; *LAKES; *MANAGEMENT; *MODELS; *RIVERS; *SIMULATION; *STATE-OF-THE-ART REVIEWS; *SYSTEMS APPROACH; *WATER QUALITY; *WATER RESOURCES; CASE STUDIES

DESCRIPTIVE NOTE: 348P.

ABSTRACT: PROVIDED IS COMPREHENSIVE INFORMATION ON MODELLING APPROACHES USED FOR DIFFERENT WATER BODIES, SUCH AS RIVERS, LAKES, AND ESTUARIES. THE DOCUMENT IS INTERNATIONAL IN SCOPE, DESCRIBING MODELS FROM THE UNITED STATES, CANADA, WEST GERMANY, ENGLAND, BELGIUM, FRANCE, AND DENMARK. THE BOOK IS ORGANIZED INTO NINE CHAPTERS, WITH TWO CHAPTERS ON THE STATE-OF-THE-ART OF RIVERS AND LAKE MODELS. THE CASE STUDY FORMAT IS USED. IN EACH CASE, DISCUSSION BEGINS WITH THE FORMULATIVE MODEL DEVELOPMENT STAGE, CONTINUES THROUGH THE CALIBRATION OF THE MODEL AND CONCLUDES WITH AN EXAMINATION OF THE FINAL RESULTS.

AVAILABILITY: MCGRAW-HILL INTERNATIONAL BOOK COMPANY, P. O. BOX 400, HIGHTSTOWN, NJ 08520

IRIS ACCESSION NUMBER: EW007423

PUBLICATION DATE: 81

TITLE: METROPOLITAN WATER MANAGEMENT.

PERSONAL AUTHOR: MILLIKEN, J. G.; TAYLOR C.

DESCRIPTOR: AGRICULTURE; *ALTERNATIVE TECHNOLOGY; COSTS; DESALINATION; *DRINKING WATER; GROUNDWATER; *MANAGEMENT; *MUNICIPALITIES; RECYCLING; *URBAN AREAS; WATER SHEDS; *WATER RESOURCES; *WATER SUPPLIES

DESCRIPTIVE NOTE: 180P. PRICE: $7.50

ABSTRACT: ADDRESSED ARE THE ISSUES AND ALTERNATIVE STRATEGIES FOR INCREASING WATER SUPPLIES OR MODIFYING DEMAND IN METROPOLITAN AREAS. STRATEGIES DISCUSSED INCLUDE WATER PRICING, WATER SYSTEM MANAGEMENT, DIVERTING SUPPLIES, REALLOCATING AGRICULTURAL WATER SUPPLIES, USE OF GROUND WATER, WATERSHED LAND MANAGEMENT TECHNIQUES, PRECIPITATION AUGMENTATION, DESALINATION, AND REUSE OF MUNICIPAL WASTEWATER.

AVAILABILITY: AMERICAN GEOPHYSICAL UNION, 2000 FLORIDA AVE., NW, WASHINGTON, DC 20009

IRIS ACCESSION NUMBER: EW007425

PUBLICATION DATE: SEP 81

TITLE: DENSITY LEVELS OF PATHOGENIC ORGANISMS IN MUNICIPAL WASTEWATER SLUDGE: A LITERATURE REVIEW.

PERSONAL AUTHOR: PEDERSEN, DANA C.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *INDICATOR ORGANISMS; *LITERATURE REVIEWS; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *PATHOGENS; PUBLIC HEALTH; *RESEARCH; *SEPTAGE; *SLUDGE; SLUDGE DEWATERING; SLUDGE STABILIZATION; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 298P. PB82-102286

ABSTRACT: REVIEWED IS THE LITERATURE ON DENSITY LEVELS OF INDICATOR AND PATHOGENIC ORGANISMS IN MUNICIPAL WASTEWATER SLUDGES AND SEPTAGE FOR THE PERIOD BETWEEN 1940 AND 1980. THE EFFECTIVENESS OF CONVENTIONAL SLUDGE STABILIZATION AND DEWATERING PROCESSES WAS EVALUATED FOR REDUCING DENSITY LEVELS OF INDICATOR AND PATHOGENIC ORGANISMS. AN ANNOTATED BIBLIOGRAPHY PRESENTS ALL THE CITATIONS REVIEWED, WITH ABSTRACTS AND THE METHODS USED BY THE RESEARCHERS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007426

PUBLICATION DATE: OCT 81

TITLE: BIODEGRADATION ON TOXIC PULPING EFFLUENTS. JANUARY, 1972-OCTOBER, 1981 (CITATIONS FROM THE INSTITUTE OF PAPER CHEMISTRY DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIODEGRADATION; *CHLORINATION; *EFFLUENTS; HAZARDOUS MATERIALS; *INDUSTRIAL WASTES; INDUSTRY; *LABORATORY PROCEDURES; *PAPER PULP; *PAPER INDUSTRY; PUBLIC HEALTH; *TOXIC SUBSTANCES; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 96P. PB82-853433

ABSTRACT: PRESENTED ARE 64 CITATIONS COVERING PROBLEMS, RESOLUTIONS, AND EVALUATIONS OF THE BIOTREATMENT OF BIODEGRADABLE TOXIC EFFLUENTS FROM PULP MILLS. MUTAGENIC CHARACTERISTICS OF WASTE FROM THE CHLORINATION OF MOST PULPS ARE DISCUSSED RELATIVE TO THE RISKS INVOLVED TO PLANT AND ANIMAL LIFE. INCLUDED ARE LABORATORY MEASUREMENTS DETERMINING THE TOXICITY OF EFFLUENTS AND VARIOUS INDUSTRIAL BIODEGRADATION PROCESSES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007427

TITLE: AMERICA'S WETLANDS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *ECOLOGY; ENVIRONMENT; ENVIRONMENTAL EDUCATION; *INSTRUCTIONAL MATERIALS; *LAND USE; *LAND MANAGEMENT; *NATURAL RESOURCES; *POST SECONDARY EDUCATION; *SCIENCE EDUCATION; *SECONDARY EDUCATION; *WATER RESOURCES; *WETLANDS; *WILDLIFE

DESCRIPTIVE NOTE: 16 MM, 28 MINUTES, COLOR.

ABSTRACT: DISCUSSED IN THIS COLOR FILM ARE WETLANDS, THEIR NATURAL BENEFITS TO WILDLIFE AND HUMANS, AND IMPACTS ASSOCIATED WITH THEIR LOSS.

AVAILABILITY: U.S. EPA AUDIOVISUAL LENDING LIBRARY, 26 WEST ST. CLAIR, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EW007428

TITLE: LAKES AND WATER QUALITY.

DESCRIPTOR: *AUDIOVISUAL AIDS; *ECOLOGY; ENVIRONMENTAL EDUCATION; *EUTROPHICATION; *INSTRUCTIONAL MATERIALS; *LAKES; *POST SECONDARY EDUCATION; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 20 MINUTE, 66 SLIDE SHOW; AVAILABLE ON LOAN; COST: $5.00 FOR POSTAGE AND HANDLING CHARGES.

ABSTRACT: PRESENTED IS A NON-TECHNICAL, SYNCHRONIZED, SLIDE-TAPE PRESENTATION THAT DISCUSSES LAKES AS ECOSYSTEMS, WATER QUALITY PROBLEMS, CAUSES OF EUTROPHICATION, AND LONG AND SHORT TERM METHODS FOR CONTROL OF CULTURAL EUTROPHICATION.

AVAILABILITY: IWR, 334 NATURAL RESOURCES BUILDING, MICHIGAN STATE UNIVERSITY, EAST LANSING, MI 48824; (517) 353-3742

IRIS ACCESSION NUMBER: EW007429

PUBLICATION DATE: 81

TITLE: OZONE TREATMENT OF INDUSTRIAL WASTEWATER.

PERSONAL AUTHOR: RICE, R. G.; BROWNING, M. E.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *BIOLOGICAL ACTIVATED CARBON; *DISINFECTION; *INDUSTRIAL WASTEWATER; *INDUSTRY; ORGANICS; *OZONE; SEWAGE; *TECHNOLOGY; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL; WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 371P. PRICE: $32.00

ABSTRACT: FOLLOWING INTRODUCTORY CHAPTERS ON OXIDATION PROCESSES AND THE FUNDAMENTAL PRINCIPLES OF OZONE TECHNOLOGY, KNOWN USES OF OZONE FOR TREATING WATERS AND WASTEWATERS FOR 20 CATEGORIES OF INDUSTRIES ARE DESCRIBED. THESE INDUSTRIAL CATEGORIES INCLUDE ELECTROPLATING, FOOD PRODUCTS, HOSPITALS, MINING, PAINTS AND VARNISHES, PETROLEUM REFINERIES, PHARMACEUTICALS, PHOTO PROCESSING, PLASTICS AND RESINS, SOAPS AND DETERGENTS, AND TEXTILES. CHAPTERS ON THE OXIDATION PRODUCTS OF ORGANIC MATERIALS AND BIOLOGICAL ACTIVATED CARBON ARE ALSO INCLUDED.

AVAILABILITY: NOYES DATA CORPORATION, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW007431

PUBLICATION DATE: 81

TITLE: HANDBOOK OF TOXIC AND HAZARDOUS CHEMICALS.

PERSONAL AUTHOR: SITTIG, MARSHALL

DESCRIPTOR: *CARCINOGENS; *CHEMICALS; *HANDBOOKS; *HAZARDOUS MATERIALS; *HAZARDOUS WASTES; HEALTH; *INFORMATION SOURCES; *MANAGEMENT; *MEASUREMENT TECHNIQUES; *SAFETY; *TOXIC SUBSTANCES; *WASTE DISPOSAL; *WASTES

DESCRIPTIVE NOTE: 72[illegible]P. PRICE: $64.00

ABSTRACT: PRESENTED IS CHEMICAL, HEALTH, AND SAFETY INFORMATION ABOUT 600 TOXIC AND HAZARDOUS MATERIALS, INCLUDING ALL OF THE USEPA PRIORITY TOXIC POLLUTANTS. THE CHEMICALS ARE PRESENTED ALPHABETICALLY AND EACH IS CLASSIFIED AS A CARCINOGEN, HAZARDOUS SUBSTANCE, HAZARDOUS WASTE AND/OR A PRIORITY TOXIC POLLUTANT AS DEFINED BY THE VARIOUS FEDERAL AGENCIES. PROPER HANDLING, POSSIBLE DANGERS, TOXIC EFFECTS AND CONTROLLED DISPOSAL ARE DISCUSSED.

AVAILABILITY: NOYES DATA CORPORATION, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW007432

PUBLICATION DATE: 81

TITLE: DESALINATION OF SEAWATER BY REVERSE OSMOSIS.

PERSONAL AUTHOR: SCOTT, JEANETTE

DESCRIPTOR: *CONSTRUCTION COSTS; *DESALINATION; DESIGN; *EQUIPMENT; *FACILITIES; MAINTENANCE; *MEMBRANE SYSTEMS; *OPERATIONS (WATER); *REVERSE OSMOSIS; *TECHNOLOGY; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 431P. PRICE: $39.00

ABSTRACT: OFFERED IS A STUDY OF THE REVERSE OSMOSIS TECHNOLOGY INVOLVED WITH THE DESALTING OF SEA WATER. THE CURRENT TECHNOLOGY IS REVIEWED, WITH 150 PROCESSES DESCRIBED IN DETAIL. EMPHASIS IS PLACED ON THE COMPOSITION OF THE MEMBRANES FROM NATURAL AND SYNTHETIC MATERIALS, MEMBRANE CONFIGURATIONS INCLUDING THE TUBULAR AND HOLLOW FIBER UNITS, SUPPORTS, MEMBRANE MAINTENANCE TO INSURE TROUBLE-FREE PRODUCTION, AND MODIFIED REVERSE OSMOSIS TECHNIQUES WITH

OTHER ENERGY SOURCES. COST ESTIMATES AND ANALYSES FOR CONSTRUCTION AND OPERATION OF 0.01 TO 5 MGD CAPACITY DESALTING PLANTS ARE PROVIDED.

AVAILABILITY: NOYES DATA CORPORATION, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW007433

PUBLICATION DATE: 80

TITLE: DESIGN OF SEWAGE SLUDGE INCINERATION SYSTEMS.

PERSONAL AUTHOR: BRUNNER, CALVIN R.

DESCRIPTOR: COMBUSTION ANALYSIS; COSTS; *DESIGN; *ECONOMICS; ENGINEERING; *EQUIPMENT; FACILITIES; *INCINERATION; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SEWAGE; *SLUDGE DISPOSAL; *TECHNOLOGY; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 380P. PRICE: $48.00

ABSTRACT: PRESENTED IS A COMPREHENSIVE TEXT DESIGNED TO PROVIDE EXPERIENCED DESIGN ENGINEERS AND INDIVIDUALS WITH LIMITED EXPERIENCE IN THE FIELLDS OF COMBUSTION ANALYSIS OR EQUIPMENT DESIGN WITH DETAILED INFORMATION ON THE DESIGN OF SEWAGE SLUDGE INCINERATION SYSTEMS. EQUIPMENT SELECTION, OPERATION AND COSTING, AND SIZING ARE EMPHASIZED. STARTING WITH A DISCUSSION OF SLUDGE GENERATION AND CHARACTERISTICS, THE TECHNOLOGICAL EMPHASIS IS UPON DESCRIPTIONS OF INCINERATION SYSTEMS AND SUBSYSTEMS, PARTICULARLY MULTIPLE HEARTH, FLUID BED, AND RADIANT HEAT FURNACE SYSTEMS. THE HIGHER TEMPERATURE DESIGNS REQUIRED TO COMPLETELY INCINERATE SLUDGE MATERIALS ARE EVALUATED. THE APPENDIX INCLUDES CALCULATOR PROGRAMS FOR THE EVALUATION OF INCINERATOR DESIGN AND OPERATION.

AVAILABILITY: NOYES DATA CORPORATION, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW007434

PUBLICATION DATE: DEC 81

TITLE: IMPROVING PRODUCTIVITY THROUGH WORK MEASUREMENT.

PERSONAL AUTHOR: PARSONS, RALPH C.

DESCRIPTOR: *COSTS; *ECONOMIC FACTORS; *MANAGEMENT; *MANPOWER NEEDS; MEASUREMENT; *PERFORMANCE EVALUATION; *PRODUCTIVITY; *TASK ANALYSIS; *UTILITIES; *WORK MEASUREMENT

DESCRIPTIVE NOTE: 610-613P.

ABSTRACT: NEW TECHNIQUES FOR IMPROVING PRODUCTIVITY CAN MEASURE WORK BASED ON A COMMON UNIT OF WORK PRODUCED -- THE NUMBER OF "STANDARD HOURS" PRODUCED IN A WEEK. THE STANDARD IS DEFINED BY THE AVERAGE TIME IT TAKES TO COMPLETE A SPECIFIC TASK BY A QUALIFIED WORKER EQUIPPED WITH APPROPRIATE TOOLS AND EQUIPMENT. PREDETERMINED TIME STANDARDS ARE ESSENTIAL FOR EFFECTIVE MANAGEMENT OF WORKER PRODUCTIVITY. THE INTELLIGENT USE OF MEASUREMENT STANDARDS HAS INCREASED WORKER PRODUCTIVITY BY 15 TO 50 PERCENT.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EW007435

PUBLICATION DATE: DEC 81

TITLE: INCREASING METER READERS' PRODUCTIVITY.

PERSONAL AUTHOR: CHIARALUCE. MARSHALL T.; ROGALA, KENNETH A.

DESCRIPTOR: *COMPUTER APPLICATIONS; *COSTS; *ECONOMIC FACTORS; *MANAGEMENT; *MANPOWER; *METER READERS; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *PRODUCTIVITY; *PROGRAM DESCRIPTIONS; *TASK ANALYSIS; *UTILITIES; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 614-616P.

ABSTRACT: THE NEW HAVEN CONN. WATER COMPANY, IN AN EFFORT TO INCREASE METER READERS' PRODUCTIVITY, ENGAGED A CONSULTANT TO ASSIST MANAGEMENT IN DEVELOPING STANDARDS OF PERFORMANCE FOR THE MANY VARIABLES AMONG THE 500 METER-READING ROUTES. THE UTILITY SERVES 12 CITIES AND TOWNS WITH A TOTAL OF 92,000 METERS. RATHER THAN ESTABLISHING A FIXED NUMBER OF METERS TO BE READ PER PERSON PER DAY, MANAGEMENT USED THE TYPES OF METERS AND THEIR LOCATION TO DETERMINE A FAIR DAY'S WORK. DATA WERE COMPUTERIZED SO THAT METER CARDS INDICATE THE TYPE OF EACH METER AND THE STANDARD TIME REQUIRED TO READ IT. THE COMPUTERIZED SYSTEM NOT ONLY SAVES TIME BUT ALSO ASSURES THAT THERE ARE ACCURATE RECORDS OF NEW ACCOUNTS, SHUT-OFFS, AND OTHER UP-TO-DATE INFORMATION. THE SYSTEM HAS PROVIDED ECONOMIES IN THE NUMBER OF METER READERS AND THE NUMBER OF ROUTES NECESSARY TO COVER THE SYSTEM, EVEN THOUGH THE TOTAL NUMBER OF METERS IS INCREASING.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EW007436

PUBLICATION DATE: DEC 81

TITLE: PREVENTIVE MAINTENANCE PROGRAMS--MUST A SYSTEM BE AUTOMATED?

PERSONAL AUTHOR: JORDAN, JAMES K.

DESCRIPTOR: *CASE STUDIES; *ECONOMIC FACTORS; *MAINTENANCE; *MANAGEMENT; *MANPOWER NEEDS; *OPERATIONS (WASTEWATER); *PROGRAM DESCRIPTIONS; *RECORDS; *RECORDKEEPING; *UTILITIES; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 617-621P.

ABSTRACT: THE WASHINGTON SUBURBAN SANITARY COMMISSION HAS RECENTLY IMPLEMENTED A SIMPLE MANUALLY CONTROLLED PREVENTIVE MAINTENANCE PROGRAM THAT IS THE FORERUNNER OF AN AUTOMATED SYSTEM. THE SYSTEM DEPENDS ON CLERICAL RECORDS AND HANDWRITTEN FIELD CHECK LISTS. NEVERTHELESS, FOR THE FIRST TIME THE UTILITY HAS A SYSTEMATIC PROGRAM TO ENSURE THAT BASIC PREVENTIVE MAINTENANCE IS DONE ON SCHEDULE AND THAT MANAGEMENT HAS THE NECESSARY INFORMATION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EW007437

PUBLICATION DATE: DEC 81

TITLE: PRODUCTIVITY GAINS THROUGH JOB REORGANIZATION AND ROTATION.

PERSONAL AUTHOR: MCGUIRE, JOHN H.

DESCRIPTOR: *CASE STUDIES; *INCENTIVES; *JOB SATISFACTION; *MANPOWER DEVELOPMENT; *PERFORMANCE EVALUATION; *PRODUCTIVITY; *PROGRAM DESCRIPTION; *TASK ANALYSIS; *UTILITIES; *WATER TREATMENT

DESCRIPTIVE NOTE: 622-623P.

ABSTRACT: AMONG THE SANTA CRUZ (CALIF.) WATER DEPARTMENT'S DISTRIBUTION DIVISION EMPLOYEES, PRODUCTIVITY HAD DECLINED BY 41 PERCENT BETWEEN THE LAST QUARTER OF 1977 AND THE LAST QUARTER OF 1978. A SYSTEM FOR MEASURING PRODUCTIVITY WAS DEVELOPED AS THE FIRST STEP IN AN INCENTIVE PROGRAM. EACH TASK WAS ASSIGNED A NUMERIC VALUE ON A SCALE OF 0.5 TO 10 ACCORDING TO THE DEGREE OF DIFFICULTY IN ORDER TO PROVIDE PRODUCTIVITY INFORMATION FOR MANAGEMENT. ATTEMPTS WERE MADE TO INCREASE JOB SATISFACTION BY MEANS OF JOB ROTATION AND SMALLER CREWS, AND MONTHLY PRODUCTIVITY REVIEW MEETINGS WERE HELD. AFTER THE PROGRAM WAS IMPLEMENTED, AVERAGE PRODUCTION ROSE 26 PERCENT, AND MANAGEMENT DISCOVERED THAT THE PROGRAM WAS SUCCEEDING IN MAINTAINING MAN-DAY PRODUCTIVITY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EW007438

PUBLICATION DATE: DEC 81

TITLE: WATER REPRESENTATIVES PROVIDE A SYSTEMATIC APPROACH TO METER READING.

PERSONAL AUTHOR: FRESHMAN, JOHN S.

DESCRIPTOR: *CASE STUDIES; *COMMUNICATIONS; *EFFICIENCY; *JOB SATISFACTION; *JOB SKILLS; *MANPOWER DEVELOPMENT; *METER READING; PERFORMANCE EVALUATION; *PRODUCTIVITY; *PROGRAM DESCRIPTION; *TRAINING; *TASK ANALYSIS; *UTILITIES; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 624-626P.

ABSTRACT: BEFORE 1976, WATER METER READING EFFICIENCY AND ACCURACY IN ALBUQUERQUE, N.M., SUFFERED BECAUSE OF LOW EMPLOYEE MORALE AND RESULTED IN MANY BILLING ERRORS. TWO YEARS LATER, A PLAN WAS DEVELOPED TO TRAIN METER READERS TO TAKE RESPONSIBILITY FOR COMMUNICATION WITH CUSTOMERS REGARDING BILLING PROBLEMS, TO REPORT SEVERE METER PROBLEMS PROMPTLY, AND TO MAKE MINOR METER REPAIRS THEMSELVES. METER READERS WERE RENAMED WATER REPRESENTATIVES, AND THEIR SALARIES WERE INCREASED ACCORDINGLY. THE SUCCESS OF THE PROGRAM, IMPLEMENTED IN 1978, IS PROVEN BY THE FACT THAT CUSTOMER COMPLAINTS HAVE DECREASED FROM 12,000 ANNUALLY TO ABOUT 600. THE PUBLIC IMAGE OF THE UTILITY HAS OBVIOUSLY IMPROVED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EW007439

PUBLICATION DATE: DEC 81

TITLE: OPERATOR CERTIFICATION: 1980 STATUS REPORT.

DESCRIPTOR: *CERTIFICATION; *EDUCATIONAL NEEDS; *EMPLOYEES; FACILITIES; *MANPOWER NEEDS; *OPERATORS; *PROGRAM DESCRIPTIONS; REQUIREMENTS; *STATE PROGRAMS; *STATUS REPORTS; *SURVEYS; *TRAINING; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 627-635P.

ABSTRACT: THE 1980 STATUS REPORT ON CERTIFICATION FOR WATER DISTRIBUTION AND WASTEWATER COLLECTION OPERATORS IN THE UNITED STATES AND CANADA IS ESSENTIALLY A REPORT ON GROWTH AND SOPHISTICATION. THE NUMBER OF CERTIFIED OPERATORS HAS GROWN 2.5 TIMES BETWEEN 1970 AND 1980; THE NUMBER OF PROGRAMS PROVIDING FOR SEPARATE CATEGORIES OF CERTIFICATION FOR WATER DISTRIBUTION AND WASTEWATER COLLECTION HAS DOUBLED SINCE 1975. STAFFING FOR AGENCIES THAT ADMINISTER CERTIFICATION PROGRAMS HAS INCREASED BY ONE THIRD BUT IS STILL SOMEWHAT BELOW ONE STAFF POSITION PER 1000 OPERATORS, INDICATING THAT THIS IS A CONTINUING NEED. IN 1980 THERE WERE APPROXIMATELY 141,000 CERTIFIED OPERATORS IN THE UNITED STATES AND CANADA.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EW007440

PUBLICATION DATE: DEC 81

TITLE: SPECIFIC AND CHELATE EXCHANGERS: NEW FUNCTIONAL POLYMERS FOR WATER AND WASTEWATER TREATMENT.

PERSONAL AUTHOR: CALMON, C.

DESCRIPTOR: *CHELATES; *CHEMISTRY; *CHEMICAL REACTIONS; *EXCHANGERS; *ION EXCHANGE; *POLYMERS; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 652-656P.

ABSTRACT: ION EXCHANGE PROCESSES HAVE PROVED EFFECTIVE FOR REMOVING IMPURITIES FROM WATER FOR SPECIFIC INDUSTRIAL USES SUCH AS BOILER FEEDWATER WHERE WATER MUST BE AS FREE OF IMPURITIES AS POSSIBLE. HOWEVER, NEW TYPES OF EXCHANGERS THAT ARE SPECIFIC OR SELECTIVE FOR A PARTICULAR ION ARE NEEDED. SOME RESINS HAVE A HIGH DEGREE OF SPECIFICITY OR SELECTIVITY. A CHELATE RESIN, WHICH IS AN INSOLUBLE POLYMER, CAN BOND METAL CATIONS TO FORM A RING INCORPORATING METALS, BUT SINCE A CHELATE EXCHANGE INVOLVES BOTH AN ION EXCHANGE AND A CHEMICAL REACTION, THERE IS A REDUCTION IN THE RATE OF REACTION. ALSO, SPECIAL OPERATING PROCEDURES DURING ELUTION OF IONS ARE A LIMITING FACTOR.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EW007441

PUBLICATION DATE: JAN 81

TITLE: EQUIVALENT HYDRAULIC PIPE FOR PARALLEL PIPES.

PERSONAL AUTHOR: JEPPSON, ROLAND W.

DESCRIPTOR: *COMPUTER APPLICATIONS; *COST EFFECTIVENESS; *HYDRAULICS; *MATHEMATICAL MODELS; *PIPES; *WATER FLOW; *WATER PIPES

DESCRIPTIVE NOTE: 35-45P.

ABSTRACT: METHODS ARE DEFINED FOR REDUCING TWO OR MORE PARALLEL PIPES TO A SINGLE HYDRAULICALLY EQUIVALENT PIPE FOR ANALYSIS USING THE DARCY-WEISBACH EQUATION THAT ALLOWS THE FRICTION FACTOR TO DEPEND UPON THE FLOW CONDITIONS IN THE PIPE, AS WELL AS THE ROUGHNESS OF THE PIPE WALL. THE MOTIVATION FOR REDUCING GROUPS OF PARALLEL PIPES TO SINGLE EQUIVALENT PIPES IS TO REDUCE COMPUTER COSTS ASSOCIATED WITH ANALYSES OF LARGE PIPING NETWORKS. COMPARISONS OF THE SAVING IN COMPUTER EXECUTION TIME ACHIEVED IN NETWORK ANALYSIS BY USING THE EQUIVALENT PIPE TECHNIQUE ARE GIVEN FOR DIFFERENT METHODS OF SOLVING LARGE NETWORKS. FOR THE REAL SYSTEM USED IN THIS COMPARISON ONE METHOD OF SOLUTION REQUIRED ONLY ONE-QUARTER OF THE TIME IF PARALLEL PIPES WERE FORMED FIRST. THE RECOMMENDATION IS THAT EXISTING NETWORK ANALYSIS COMPUTER PROGRAMS INCORPORATE IN THEIR CODE THE CREATION OF HYDRAULIC EQUIVALENT PIPES FOR ALL GROUPS OF PARALLEL PIPES.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION, V108 N1

IRIS ACCESSION NUMBER: EW007442

PUBLICATION DATE: JAN 82

TITLE: OBTAINING LAYOUT OF WATER DISTRIBUTION SYSTEMS.

PERSONAL AUTHOR: ROWELL, WILLIAM F.; BARNES, J. WESLEY

DESCRIPTOR: *DESIGN; *HYDRAULICS; *MATHEMATICAL MODELS; *MUNICIPALITIES; *WATER SYSTEMS; WATER DISTRIBUTION; *WATER PIPES

DESCRIPTIVE NOTE: 137-148P.

ABSTRACT: AN ESSENTIAL FIRST STEP IN THE DESIGN OF A MUNICIPAL WATER DISTRIBUTION SYSTEM IS THE DETERMINATION OF THE LOCATIONAL PLACEMENT OR LAYOUT OF THE LINKS OF PIPE THAT WILL FORM THE SYSTEM. A TWO-LEVEL HIERARCHICALLY INTEGRATED SYSTEM OF MODELS IS DEVELOPED FOR THE LAYOUT OF BOTH SINGLE AND MULTIPLE SOURCE WATER DISTRIBUTION SYSTEMS. THE FIRST LEVEL, A NONLINEAR PROGRAMMING MODEL, SELECTS AN ECONOMICAL TREE LAYOUT FOR THE MAJOR PIPE LINKS. THE SECOND LEVEL, AN INTEGER PROGRAMMING MODEL, CHOOSES THE LOOP-FORMING LINKS TO ADD TO THE FIRST LEVEL TREE LAYOUT IN ORDER TO MINIMIZE THE COST OF PROVIDING A SPECIFIED LEVEL OF RELIABILITY IN CASE OF FAILURE OF THE LARGER FIRST LEVEL LINKS. THE SYSTEM OF MODELS IS APPLIED TO AN EXAMPLE TWO-SOURCE WATER DISTRIBUTION SYSTEM LAYOUT PROBLEM.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION, V108 N1

IRIS ACCESSION NUMBER: EW007443

PUBLICATION DATE: JAN 81

TITLE: DEVELOPING AN EFFECTIVE MAINTENANCE PROGRAM.

PERSONAL AUTHOR: FREIBERG, GEORGE R.; THOMPSON, WILLIAM B.

DESCRIPTOR: *EQUIPMENT; EVALUATION; *FACILITIES; *MAINTENANCE; *MAINTENANCE (PREVENTATIVE); *MANAGEMENT; MANPOWER UTILIZATION; *OPERATIONS (WASTEWATER); PLANNING; *PROGRAM DESCRIPTIONS; *PROGRAM DEVELOPMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 30-33P.

ABSTRACT: THIS ARTICLE REPORTS ON A STUDY AT THE 105 MGD MORRIS FORMAN WASTEWATER TREATMENT PLANT IN LOUISVILLE, KENTUCKY TO DEVELOP EVALUATION AND IMPLEMENTATION PROCEDURES FOR ESTABLISHING OR UPGRADING MAINTENANCE SYSTEMS. FOCUS IS ON PREVENTATIVE MAINTENANCE WITH SPECIFIC PROGRAM EVALUATION AND IMPLEMENTATION STEPS EXPLAINED.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V129 N1

IRIS ACCESSION NUMBER: EW007444

PUBLICATION DATE: JAN 82

TITLE: STORM AND COMBINED SEWERS: PART OF THE TREATMENT PROCESS.

PERSONAL AUTHOR: FIELD, RICHARD

DESCRIPTOR: *DESIGN; *EQUIPMENT; *FACILITIES; *MAINTENANCE;

*MANAGEMENT; *OPERATIONS (WASTEWATER); *SEWER SYSTEMS; *STORM SEWERS; STORMWATER; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 34-36, 39P.

ABSTRACT: THIS ARTICLE EXAMINES OPERATIONAL PARAMETERS OF PROGRAMS WHERE COLLECTION SYSTEMS ARE DESIGNED AND OPERATED FOR THE DUAL PURPOSES OF DRAINAGE AND POLLUTION CONTROL. TOPICS ADDRESSED INCLUDE: INSPECTION AND MAINTENANCE, CATCHBASINS, NEW SEWER DESIGN, SEWER FLUSHING, POLYMER INJECTION, INFILTRATION/INFLOW CONTROLS, UPSTREAM STORAGE/ATTENUATION, FLOW ROUTING AND IN-PIPE STORAGE, NEW TYPES OF FLOW REGULATORS, AND THE DUCK BILL TIDE GATE.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V129 N1

IRIS ACCESSION NUMBER: EW007445

PUBLICATION DATE: JAN 81

TITLE: SIZING AND SELECTING MODERN WATER METERS.

PERSONAL AUTHOR: SERUCA, ED

DESCRIPTOR: *EQUIPMENT; *EQUIPMENT STANDARDS; *FLOW RATES; *METERS; *UTILITIES (WATER); *WATER SUPPLY; *WATER METERS

DESCRIPTIVE NOTE: 40-42P.

ABSTRACT: THIS ARTICLE PRESENTS A REVIEW OF THE WIDE RANGE OF SIZES AND TYPES OF WATER METERS AVAILABLE AND ANSWERS TYPICAL QUESTIONS THAT ARISE DURING THE METER SELECTION PROCESS. GUIDES ARE GIVEN FOR AWWA TURBINE METER STANDARDS FOR CUSTOMER SERVICE AND RECOMMENDED USES FOR METERS BY TYPE CLASSIFICATION.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V129 N1

IRIS ACCESSION NUMBER: EW007446

PUBLICATION DATE: JAN 81

TITLE: SHAKING DOWN A SOLIDS HANDLING SYSTEM.

PERSONAL AUTHOR: TEITTINEN, ERIC

DESCRIPTOR: *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *PROBLEM SOLVING; *SOLIDS HANDLING; *START-UP; *TROUBLESHOOTING; VACUUM PUMPS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 45-46P.

ABSTRACT: THIS ARTICLE PRESENTS A CHRONOLOGY OF THE INVESTIGATION WHICH SOLVED SERIOUS START-UP PROBLEMS IN A NEW WASTEWATER TREATMENT PLANT. A PROBLEM SOLVING CHART IS PROVIDED ALONG WITH DETAILED EXPLANATION OF STEPS TAKEN TO GET THE PLANT OPERATING AT PEAK LEVEL.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V129 N1

IRIS ACCESSION NUMBER: EW007447

PUBLICATION DATE: JAN 81

TITLE: DUAL DISTRIBUTION SYSTEM SOLVES PELICAN BAY'S WATER SUPPLY PROBLEMS.

PERSONAL AUTHOR: WRIGHT, ROBERT R.; BIERY, P. FRED

DESCRIPTOR: *COSTS; *DESIGN; *EQUIPMENT; *FACILITIES; *IRRIGATION; *NON-POTABLE WATER; *POTABLE WATER; *WATER DISTRIBUTION; WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 46-48P.

ABSTRACT: THIS ARTICLE DISCUSSES THE APPROACH THAT ONE FLORIDA COASTAL COMMUNITY TOOK IN SUPPLYING FRESHWATER AT TWO DIFFERENT QUALITY LEVELS: ONE FOR RESIDENTIAL AND COMMERCIAL USE, AND ONE FOR IRRIGATION PURPOSES. EXPLAINED IS THEIR DUAL WATER SYSTEM CONSISTING OF TWO SEPARATE AND USUALLY PARALLEL PIPE LINES AND THE REQUIRED PUMPS, VALVES, AND TREATMENT EQUIPMENT.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V129 N1

IRIS ACCESSION NUMBER: EW007448

PUBLICATION DATE: JAN 82

TITLE: DATA BASES FOR ENVIRONMENTAL ENGINEERS.

PERSONAL AUTHOR: CHERRY, KENNETH F.

DESCRIPTOR: COMPUTER APPLICATIONS; *COMPUTERS; *DATA BASES; ENGINEERING; *ENVIRONMENTAL ENGINEERING; *GUIDES; INFORMATION NETWORKS; *INFORMATION SOURCES

DESCRIPTIVE NOTE: 30-31P.

ABSTRACT: THIS ARTICLE PRESENTS AN OVERVIEW OF DATA BASE SERVICES AVAILABLE TO ENVIRONMENTAL ENGINEERS. INCLUDED IS A SAMPLING OF DATA BASE AND INFORMATION SERVICES AND RATES FOR TEN MAJOR DATA BASES.

AVAILABILITY: POLLUTION ENGINEERING, V14 N1

IRIS ACCESSION NUMBER: EW007449

PUBLICATION DATE: JAN 82

TITLE: INDUSTRIAL WASTE EXCHANGES.

PERSONAL AUTHOR: MOORE, LARRY E.

DESCRIPTOR: CHEMICALS; *EXCHANGES; *GUIDES; *INDEXES (LOCATERS); *INDUSTRIAL WASTES; *RECYCLING; *RESOURCE RECOVERY; *WASTE EXCHANGES; *WASTE MANAGEMENT

DESCRIPTIVE NOTE: 33P.

ABSTRACT: PRESENTED IS A GUIDE TO 30 INDUSTRIAL WASTE EXCHANGES IN 23 STATES. INCLUDED IS: COMPANY NAME, CONTACT PERSON, ADDRESS, AND TELEPHONE NUMBER.

AVAILABILITY: POLLUTION ENGINEERING, V14 N1

IRIS ACCESSION NUMBER: EW007450

PUBLICATION DATE: JAN 82

TITLE: NATIONAL AND INTERNATIONAL ASSOCIATIONS DEALING WITH ENVIRONMENTAL INFORMATION.

DESCRIPTOR: *ENVIRONMENTAL EDUCATION; *ENVIRONMENTAL QUALITY; *ENVIRONMENT; *GUIDES; *INDEXES (LOCATERS); *INFORMATION SOURCES; INTERNATIONAL ORGANIZATIONS; *NATIONAL ORGANIZATIONS; NATURAL RESOURCES; POLLUTION CONTROL

DESCRIPTIVE NOTE: 37P.

ABSTRACT: PRESENTED IS A GUIDE TO 43 NATIONAL AND INTERNATIONAL ORGANIZATIONS DEALING WITH ENVIRONMENTAL INFORMATION. INCLUDED IS: NAME OF ORGANIZATION, ADDRESS, AND TELEPHONE NUMBER.

AVAILABILITY: POLLUTION ENGINEERING, V14 N1

IRIS ACCESSION NUMBER: EW007451

PUBLICATION DATE: JAN 82

TITLE: STATE ENVIRONMENTAL PROTECTION AGENCIES.

DESCRIPTOR: *DIRECTORIES; *ENVIRONMENTAL PROTECTION AGENCY; *ENVIRONMENTAL QUALITY; *GUIDES; *INDEXES; *NATURAL RESOURCES; *POLLUTION CONTROL; PUBLIC HEALTH; *STATE AGENCIES

DESCRIPTIVE NOTE: 38-39P.

ABSTRACT: PRESENTED IS A GUIDE TO STATE ENVIRONMENTAL PROTECTION AGENCIES. INCLUDED IS: AGENCY NAME, ADDRESS, AND TELEPHONE NUMBER.

AVAILABILITY: POLLUTION ENGINEERING, V14 N1

IRIS ACCESSION NUMBER: EW007452

PUBLICATION DATE: JAN 82

TITLE: CONTRACT OPERATIONS FOR POTWS: PITFALLS AND PROFITS FOR THE PRIVATE SECTOR.

PERSONAL AUTHOR: JENSEN, MARGARET SLAJCHERT; MCMAHON, ROBERT F.

DESCRIPTOR: *CONSULTING FIRMS; *CONTRACTS; *MAINTENANCE; *OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; POLICIES; *PUBLIC WORKS; RESEARCH REPORTS; *SERVICE CONTRACTS; *SURVEYS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 11-15P.

ABSTRACT: THIS PAPER PRESENTS THE FINDINGS OF RESEARCH CONDUCTED BY THE AUTHORS FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) ON THE EXTENT OF PRIVATE SECTOR INVOLVEMENT IN THE OPERATION AND MAINTENANCE (O&M) OF PUBLICLY OWNED TREATMENT WORKS (POTWS). BASED ON INTERVIEWS WITH WASTEWATER O&M CONSULTING FIRMS AND THEIR CLIENTS, THE FACTORS AFFECTING THE SUPPLY AND DEMAND FOR AND QUALITY OF CONTRACT OPERATIONS ARE EXAMINED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007453

PUBLICATION DATE: JAN 82

TITLE: AIR DRYING LIQUID ANAEROBICALLY DIGESTED SLUDGE IN EARTHEN DRYING BASINS.

PERSONAL AUTHOR: BAXTER, JOHN C.; MARTIN, WILLIAM J.

DESCRIPTOR: *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SEWAGE; *SLUDGE DRYING; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 16-26P.

ABSTRACT: THE METROPOLITAN DENVER SEWAGE DISPOSAL DISTRICT NO. 1 IS PLANNING CONSTRUCTION OF A SLUDGE DRYING AND DISTRIBUTION CENTER. THIS PLAN ENTAILS PUMPING LIQUID ANAEROBICALLY DIGESTED SLUDGE THROUGH A 40-KM PIPELINE AND AIR DRYING THE SLUDGE IN EARTHEN DRYING BASINS. STUDIES WERE INITIATED TO EXAMINE THE MOST EFFICIENT DEPTHS OF SLUDGE APPLICATION TO THE EARTHEN DRYING BEDS THAT WOULD ENHANCE DRYING RATES AND STILL LIMIT THE POTENTIAL FOR GROUNDWATER DEGRADATION FROM LEACHING OF NITRATES FROM THE SLUDGE. IT WAS FOUND THAT APPROXIMATELY 390 METRIC TONS OF SLUDGE PER HECTARE COULD BE DRIED TO A 40% MOISTURE CONTENT IN A YEAR'S TIME WITHOUT LEACHING SIGNIFICANT QUANTITIES OF NITRATES TOWARDS THE GROUND WATER.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007454

PUBLICATION DATE: JAN 82

TITLE: VACUUM FILTRATION OF SEPTAGE.

PERSONAL AUTHOR: OTT, CHARLES R.; SEGALL, BURTON A.

DESCRIPTOR: *FILTRATION; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SEPTAGE;

*SEPTIC TANKS; SLUDGE; *SLUDGE CONDITIONING; *VACUUM FILTRATION; *WASTE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 27-35P.

ABSTRACT: SEPTAGE (SEPTIC-TANK WASTE) WAS CHEMICALLY CONDITIONED WITH ALUMINUM SULFATE, FERRIC CHLORIDE, OR SULFURIC ACID. SUPERNATANT WAS DECANTED AND THE THICKENED SLUDGE VACUUM FILTERED OR MIXED WITH THICKENED WASTE-ACTIVATED SLUDGE AND THEN FILTERED. CHARACTERISTICS OF THE SEPTAGE, SUPERNATANT, FILTER CAKE, AND FILTRATE WERE MONITORED. VACUUM FILTRATION OF THE CONDITIONED SEPTAGE SLUDGES ALONE IS NOT FEASIBLE. HOWEVER, MIXTURES OF SPETAGE AND THICKENED WASTE-ACTIVATED SLUDGE UP TO 55% SEPTAGE SOLIDS WERE READILY FILTERABLE AND PRODUCED BETTER CAKE YIELDS THAN THICKENED WASTE-ACTIVATED SLUDGE BY ITSELF.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007455

PUBLICATION DATE: JAN 82

TITLE: USE OF MICROSCREENS TO POLISH LAGOON EFFLUENTS.

PERSONAL AUTHOR: HARRELSON, MICHAEL E.; CRAVENS, JOE BOB

DESCRIPTOR: *ALGAE; *COST EFFECTIVENESS; COSTS; *DESIGN; *EFFLUENTS; *EQUIPMENT; *FILTERS; *LAGOONS; *MICROSCREENS; *PERFORMANCE EVALUATION; *PILOT STUDIES; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 36-42P.

ABSTRACT: EXTENSIVE FIELD TESTS WERE CONDUCTED PRIOR TO THE SELECTION OF MICROSCREENS WITH ULTRAFINE POLYESTER MEDIA TO UPGRADE A WASTEWATER STABILIZATION LAGOON SYSTEM IN CAMDEN, SC. SUMMARIES OF THE PROCESS DESIGN CRITERIA, UNIT PROCESS SIZING REQUIREMENTS, AND COST-EFFECTIVE ANALYSIS ARE INCLUDED. THIS LAGOON UPGRADING, UTILIZING MICROSCREENS FOR ALGAE REMOVAL, WILL BE THE FIRST SYSTEM OF ITS KIND IN THE U.S.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007456

PUBLICATION DATE: JAN 82

TITLE: MUNICIPAL WASTEWATER RECLAMATION BY REVERSE OSMOSIS--A 3-YEAR CASE STUDY.

PERSONAL AUTHOR: STENSTROM, MICHAEL K.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *DISSOLVED SOLIDS; *MAINTENANCE; *MATHEMATICAL MODELS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RECLAMATION; *RECYCLING; *REVERSE OSMOSIS; *WASTEWATER TREATMENT; *WATER CONSERVATION; *WATER REUSE

DESCRIPTIVE NOTE: 43-51P.

ABSTRACT: WATER CONSERVATION AND RECLAMATION ARE OF PRIME IMPORTANCE IN CALIFORNIA. MUNICIPAL WASTEWATER, WHICH COULD BE RECLAIMED FOR AGRICULTURAL AND INDUSTRIAL USE, WILL PLAY A MAJOR ROLL IN ALLEVIATING THE PREDICTED WATER SHORTAGE. CONSEQUENTLY, SEVERAL MAJOR WATER RECYCLING PROGRAMS ARE BEING EVALUATED. THREE YEARS' OPERATING DATA ARE PRESENTED IN THE PAPER, ALONG WITH A DETAILED DESCRIPTION OF FLUX MAINTENANCE AND CLEANING TECHNIQUES. ALSO INCLUDED IS A MATHEMATICAL MODEL OF THE PROCESS THAT CAN BE USED TO DETERMINE AN ECONOMICALLY OPTIMAL DESIGN FOR MUNICIPAL WASTEWATER RECLAMATION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007457

PUBLICATION DATE: JAN 82

TITLE: INFLUENCE OF DISSOLVED OXYGEN ON SUBSTRATE UTILIZATION KINETICS OF ACTIVATED SLUDGE.

PERSONAL AUTHOR: KNUDSON, MARK K.; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; *DISSOLVED OXYGEN; *KINETICS; *OXYGEN; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *SLUDGE; SUSPENDED SOLIDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 52-60P.

ABSTRACT: OXYGEN LIMITATION IN ACTIVATED SLUDGE IS SHOWN TO RESULT PROBABLY FROM MASS TRANSFER LIMITATIONS INTO LARGE FLOCS. MAXIMUM SUBSTRATE REMOVAL RATES BASED ON TOTAL SUSPENDED SOLIDS INCREASED AS DISSOLVED OXYGEN (DO) CONCENTRATION INCREASED TO ABOUT 15 MG/L. THE MAXIMUM SUBSTRATE REMOVAL RATE WAS CONSTANT BASED ON ACTIVE CELL MASS. DISSOLVED OXYGEN LIMITATION CAN RESULT IN LOWER ALLOWABLE SUBSTRATE RATES AND HIGHER SLUDGE PRODUCTION RATES. MANY ACTIVATED SLUDGE SYSTEMS MAY BE OXYGEN LIMITED AT DO CONCENTRATIONS SIGNIFICANTLY HIGHER THAN PERVIOUSLY REPORTED DO-LIMITATION THRESHOLDS OF ABOUT 2 MG/L.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007459

PUBLICATION DATE: JAN 82

TITLE: OPTIMIZATION OF AREAWIDE WASTEWATER MANAGEMENT.

PERSONAL AUTHOR: PHILLIPS, KEVIN J.; AND OTHERS

DESCRIPTOR: *ADMINISTRATION; *CASE STUDIES; *COSTS; *ECONOMIC FACTORS; *EVALUATION; *MANAGEMENT; *PLANNING; *POLLUTION CONTROL; *REGULATIONS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 87-93P.

ABSTRACT: IN 1972, CONGRESS MANDATED THAT WASTEWATER MANAGEMENT PLANS BE COMPLETED FOR EACH AREA IN THE NATION. ONE SUCH AREA IS NASSAU COUNTY IN LONG ISLAND, NY, WHERE--IN COMPLIANCE WITH THE FEDERAL GUIDELINES--A STUDY WAS UNDERTAKEN UTILIZING A MIXED INTEGER MODEL TO SCREEN WASTEWATER MANAGEMENT ALTERNATIVES. THIS STUDY RESULTED IN A LEAST-COST WASTEWATER MANAGEMENT PLAN THAT SPECIFIED LOCATION, EXPANSION, AND UPGRADING FOR 25 WASTEWATER TREATMENT PLANTS IN THE REGION. THE MODEL AND ITS VALIDATION ARE DISCUSSED AND CONCLUSIONS ARE PRESENTED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007460

PUBLICATION DATE: JAN 82

TITLE: TREATMENT OF HIGH-STRENGTH FATTY AMINES WASTEWATER--A CASE HISTORY.

PERSONAL AUTHOR: HUFF, JAMES E.; MUCHMORE, CHARLES B.

DESCRIPTOR: *AMINES; *CASE STUDIES; *EQUIPMENT; *FACILITIES; *FATTY ACIDS; *INDUSTRIAL WASTES; *IRRIGATION SYSTEMS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 94-102P.

ABSTRACT: A FATTY AMINES PLANT IN OPERATION SINCE 1974 WAS DESIGNED INITIALLY WITH PRIMARY, SECONDARY, AND TERTIARY TREATMENT FACILITIES TO HANDLE A HIGH-STRENGTH AMINES WASTE. THE FACILITIES WERE FOUND TO BE INADEQUATE, PRIMARILY BECAUSE OF NO WINTER STORAGE AND EXCESSIVE HYDRAULIC, ORGANIC, AND NITROGEN LOADINGS ON THE SPRAY FIELD. LABORATORY AND PILOT TESTING ON ROTATING BIOLOGICAL CONTRACTORS, ACTIVATED SLUDGE, AND CHEMICAL TREATMENT WITH FLOTATION WERE PERFORMED. ULTTIMATELY, A NEW SPRAY IRRIGATION SYSTEM WAS SELECTED. OTHER IMPROVEMENTS INCLUDED THE USE OF SUPPLEMENTAL BACTERIA IN THE AERATED LAGOONS AND A FAT RECOVERY CHAMBER WITH FAT RECYCLE IN THE RAW MATERIAL AREA.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007461

PUBLICATION DATE: JAN 82

TITLE: OPERATION REPORTS - CITY OF MIDLAND, MICHIGAN.

DESCRIPTOR: *CASE STUDIES; CHEMICALS; *COSTS; *FACILITIES; *MAINTENANCE; *MICHIGAN; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; SANITARY SEWERS; STORM SEWERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 114-115P.

ABSTRACT: THIS ARTICLE PRESENTS OPERATION INFORMATION FOR THE WASTEWATER TREATMENT FACILITIES OF MIDLAND, MICHIGAN. SPECIFIC DATA ARE PRESENTED FOR SANITARY AND STORM SEWER CLEANING, PLANT MAINTENANCE, CHEMICAL COSTS, AND GENERAL OPERATING PARAMETERS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007471

PUBLICATION DATE: FEB 82

TITLE: WHAT YOU SHOULD KNOW ABOUT INDUSTRIAL WASTEWATER SURVEYS.

PERSONAL AUTHOR: TUTEIN, THOMAS R.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *COSTS; *EFFLUENTS; *FLOW RATES; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *SAMPLING; *SURVEYS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 40-42P.

ABSTRACT: THIS ARTICLE DISCUSSES VARIOUS ASPECTS OF INDUSTRIAL WASTEWATER SURVEYS AS THEY PERTAIN TO DIAGNOSING SYSTEM PROBLEMS AND IDENTIFYING WATER QUALITY PARAMETERS. THE ARTICLE EXAMINES PRE-SURVEY PROCEDURES, FLOW METERING AND SAMPLING TECHNIQUES, DYE TRACING, INDIVIDUAL PROCESS FLOW RATES, AND COST ESTIMATES.

AVAILABILITY: POLLUTION ENGINEERING, V14 N2

IRIS ACCESSION NUMBER: EW007472

PUBLICATION DATE: 81

TITLE: WINDROW COMPOSTING MUNICIPAL SEWAGE WASTES FOR LAND APPLICATION.

PERSONAL AUTHOR: CHESNIN, LEON

DESCRIPTOR: *COMPOSTING; EQUIPMENT; *LAND APPLICATION; *MUNICIPAL WASTES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; SEWAGE; *SLUDGE; *WASTEWATER TREATMENT; *WASTE DISPOSAL; WASTE TREATMENT; *WINDROW COMPOSTING

DESCRIPTIVE NOTE: 85-91P.

ABSTRACT: WINDROW COMPOSTING OF MUNICIPAL SEWAGE WASTES INVOLVES THE MIXING OF DEWATERED (FILTERED) SEWAGE SLUDGE OR SLUDGE SLURRY WITH AN ORGANIC DRYING-BULKING AGENT. THE MIXTURE, WITH A MOISTURE CONTENT BELOW 60%, IS PLACED IN A LONG PILE (WINDROW). A COMPUTER PROGRAM WAS DEVELOPED BY THE AUTHOR FOR THE USE IN DETERMINING THE AMOUNTS OF DRYING-BULKING AGENT AND SEWAGE SLUDGE OR SLURRY REQUIRED TO OBTAIN AN OPTIMUM MIXTURE FOR COMPOSTING. THE AMOUNTS OF THE

MIXTURE COMPONENTS ARE DEPENDENT ON TEMPERATURE AND DIFFER IN THE WARM OR COLD SEASONS OF THE YEAR. WINDROW COMPOSTING IS AN AEROBIC PROCESS THAT DEPENDS ON THE DIFFUSION OF AIR INTO THE PILE TO SUPPLY THE OXYGEN NEEDED BY THE MICROBIAL POPULATION. MODIFIED FARM MANURE SPREADERS, HYDRAULIC FEED MIXING WAGONS AND FRONT-END LOADERS HAVE BEEN USED TO MIX THE COMPOST COMPONENTS. THE DRYING-BULKING AGENTS THAT HAVE BEEN USED ARE: SAWDUST, LEAVES, RACEHORSE BEDDING (STRAW), FEEDLOT MANURE AND GROUND CORNCOBS AND SHUCKS. HIGH RATES OF APPLICATION OF COMPOST TO AGRICULTURAL SOILS REDUCED SOIL DENSITY AND THE FUEL REQUIREMENTS FOR TILLAGE OPERATIONS. ORGANIC AMENDMENTS INCREASED THE HYDRAULIC CONDUCTIVITY AND WATER INFILTRATION RATE OF SOILS. COMPOSTING SEWAGE SLUDGE GREATLY INCREASES THE AVAILABILITY OF THE NITROGEN PRESENT IN AN ORGANIC FORM.

AVAILABILITY: THE ENVIRONMENTAL PROFESSIONAL, V3 N1/2

IRIS ACCESSION NUMBER: EW007473

PUBLICATION DATE: 81

TITLE: SELECTED UNIVERSITY RESEARCH AND EDUCATIONAL PROGRAMS IN TOXICOLOGY.

PERSONAL AUTHOR: ZIMMER, KYLE; HIRST, KRIS

DESCRIPTOR: *COLLEGE PROGRAMS; *GRADUATE STUDY; *HIGHER EDUCATION; *PROGRAM DESCRIPTIONS; RESEARCH PROGRAMS; *SURVEYS; *TOXICOLOGY; *UNIVERSITIES

DESCRIPTIVE NOTE: 177-184P.

ABSTRACT: THIS ARTICLE REVIEWS REPORTS ON 12 SELECTED UNIVERSITY PROGRAMS IN TOXICOLOGY. DESCRIPTIONS OF GRADUATE PROGRAMS IN TOXICOLOGY ARE PROVIDED FOR: UNIVERSITY OF ARIZONA; UNIVERSITY OF CALIFORNIA--DAVIS; UNIVERSITY OF IOWA; JOHN HOPKINS UNIVERSITY; KANSAS STATE UNIVERSITY; UNIVERSITY OF MICHIGAN; UNIVERSITY OF MISSOURI; NEW YORK UNIVERSITY; PURDUE UNIVERSITY; STATE UNIVERSITY OF NEW YORK AT STONY BROOK; WASHINGTON STATE UNIVERSITY/UNIVERSITY OF IDAHO; AND, THE UNIVERSITY OF WISCONSIN.

AVAILABILITY: THE ENVIRONMENTAL PROFESSIONAL, V3 N1/2

IRIS ACCESSION NUMBER: EW007474

PUBLICATION DATE: 81

TITLE: GRADUATE PROGRAMS IN TOXICOLOGY.

DESCRIPTOR: *COLLEGE PROGRAMS; *DIRECTORIES; *GRADUATE STUDY; *GUIDES; *HIGHER EDUCATION; *INDEXES; *RESEARCH PROGRAMS; *TOXICOLOGY; *UNIVERSITIES

DESCRIPTIVE NOTE: 185-189P.

ABSTRACT: THIS IS A LIST OF SCHOOLS PROVIDING GRADUATE TRAINING IN TOXICOLOGY. DEPARTMENT PROGRAMS, ADDRESSES, AND CONTACT PERSONS ARE GIVEN FOR 103 PROGRAMS IN 31 STATES.

AVAILABILITY: THE ENVIRONMENTAL PROFESSIONAL, V3 N1/2

IRIS ACCESSION NUMBER: EW007475

PUBLICATION DATE: WIN 82

TITLE: PERSPECTIVES IN GROUND WATER RESEARCH: THE NATIONAL CENTER FOR GROUND WATER RESEARCH.

PERSONAL AUTHOR: NIELSEN, DAVID

DESCRIPTOR: ENVIRONMENTAL PROTECTION AGENCY; *GROUNDWATER; *INFORMATION CENTERS; RESEARCH; *RESEARCH CENTERS; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 22-23P.

ABSTRACT: THIS ARTICLE DISCUSSES THE ESTABLISHMENT AND AIMS OF THE NATIONAL CENTER FOR GROUNDWATER RESEARCH. THE PRIMARY FOCUS OF THE RESEARCH CENTER IS TO ADDRESS FOUR MAJOR ISSUES IDENTIFIED BY THE USEPA AS PROBLEM AREAS IN GROUNDWATER PROTECTION. THESE ARE: TRANSPORT AND FATE OF CONTAMINANTS; SUBSURFACE CHARACTERIZATION; METHODS DEVELOPMENT; AND INFORMATION TRANSFER. THE ARTICLE INTERVIEWS THE CENTER'S DIRECTORS AND EXAMINES THE RESEARCH STRATEGIES FOR THE FOUR PROBLEM AREAS.

AVAILABILITY: GROUND WATER MONITORING REVIEW, V2 N1

IRIS ACCESSION NUMBER: EW007476

PUBLICATION DATE: WIN 82

TITLE: A STATE GROUNDWATER MANAGEMENT PROGRAM.

PERSONAL AUTHOR: GIESE, RAYMOND G.

DESCRIPTOR: *CONTAMINATION; DRINKING WATER; *GROUNDWATER; LEGAL ASPECTS; *MANAGEMENT; PLANNING; POLLUTION CONTROL; *PROGRAM DESCRIPTIONS; *PROGRAM DEVELOPMENT; *STATE PROGRAMS; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 26-30P.

ABSTRACT: THE PURPOSE OF THIS ARTICLE IS TO PRESENT A DESIGN FOR DEVELOPING A COMPREHENSIVE GROUNDWATER MANAGEMENT PROGRAM. THE SUGGESTED DESIGN REPRESENTS A COMPILATION OF IDEAS FROM STATES THAT ARE CURRENTLY DEVELOPING GROUNDWATER PROGRAMS. SECTIONS INCLUDE GROUNDWATER MANAGEMENT PROTOTYPES, ELEMENTS OF A GROUNDWATER PROGRAM, POLLUTION CONTROL POLICIES AND MECHANISMS, EMERGENCY AND REMEDIAL CAPABILITY, INFORMATION NEEDS, AND PROGRAM MANAGEMENT.

AVAILABILITY: GROUND WATER MONITORING REVIEW, V2 N1

IRIS ACCESSION NUMBER: EW007477

PUBLICATION DATE: WIN 82

TITLE: MONITORING IN THE VANDOSE ZONE: PART II.

PERSONAL AUTHOR: WILSON, L. G.

DESCRIPTOR: *FLOW MEASUREMENT; *FLOW RATES; *GROUNDWATER; *INFILTRATION; LIQUID WASTES; MEASUREMENT; *MONITORING; PERCOLATION; *RESEARCH REPORTS; *VANDOSE ZONE; *WASTE DISPOSAL; *WASTEWATER

DESCRIPTIVE NOTE: 31-42P.

ABSTRACT: THE THREE PAPERS IN THIS SERIES CONSTITUTE AN ELEMENTARY EXPOSITION OF METHODS FOR VADOSE ZONE MONITORING. IN THIS PART, THE ARTICLE DISCUSSES METHODS FOR CHARACTERIZING THE TRANSMISSION OF LIQUID WASTES IN THE VADOSE ZONE. TOPICS ADDRESSED INCLUDE: INFILTRATION, PERCOLATION, AND FIELD METHODS FOR DETERMINING THE RATE OF WATER MOVEMENT IN THE VADOSE ZONE. ALSO PRESENTED IS A CATALOG OF METHODS FOR ESTIMATING VADOSE ZONE FLOW RATES.

AVAILABILITY: GROUND WATER MONITORING REVIEW, V2 N1

IRIS ACCESSION NUMBER: EW007478

PUBLICATION DATE: WIN 82

TITLE: SURFACE GEOPHYSICAL TECHNIQUES IN GROUNDWATER MONITORING PART II.

PERSONAL AUTHOR: YAZICIGIL, HASAN; SENDLEIN, LYLE V. A.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; AQUIFERS; ELECTRICAL RESISTIVITY; GEOLOGY; *GEOPHYSICS; *GROUNDWATER; *HYDROGEOLOGY; MAPPING; *MONITORING; *RESEARCH REPORTS; THERMAL METHODS

DESCRIPTIVE NOTE: 56-62P.

ABSTRACT: THIS IS THE SECOND PART OF A TWO-PART ARTICLE IN WHICH SURFACE GEOPHYSICAL METHODS FOR GROUNDWATER MONITORING ARE REVIEWED. THE USE OF ELECTRICAL RESISTIVITY AND THERMAL METHODS ARE DISCUSSED IN DETAIL. BOTH METHODS ARE DESCRIBED, MODELED, AND APPLIED TO FIELD SITUATIONS.

AVAILABILITY: GROUND WATER MONITORING REVIEW, V2 N1

IRIS ACCESSION NUMBER: EW007479

PUBLICATION DATE: WIN 82

TITLE: TWO GAS-DRIVE SAMPLING DEVICES

PERSONAL AUTHOR: ROBIN, MICHAEL J. L.; AND OTHERS

DESCRIPTOR: *EQUIPMENT; *GAS-DRIVE SAMPLERS; *GROUNDWATER; *HYDROLOGY; *MONITORING; *PERFORMANCE EVALUATION; PIEZOMETERS; *SAMPLING; *WATER QUALITY; WELLS

DESCRIPTIVE NOTE: 63-66P.

ABSTRACT: THIS ARTICLE DESCRIBES TWO NEW SELF-CONTAINED SAMPLING DEVICES (THE DOUBLE-TUBE AND TRIPLE-TUBE GAS-DRIVE SAMPLERS). BOTH ARE REPORTED TO PROVIDE EXCELLENT MEANS OF SAMPLING EXISTING SMALL-DIAMETER PIEZOMETERS WITH WATER LEVELS BELOW THE LIMIT OF SUCTION LIFT.

AVAILABILITY: GROUND WATER MONITORING REVIEW, V2 N1

IRIS ACCESSION NUMBER: EW007480

PUBLICATION DATE: WIN 82

TITLE: PROBLEMS OF MONITORING NETWORK DESIGN TO DETECT UNANTICIPATED CONTAMINATION.

PERSONAL AUTHOR: PFANNKUCH, HANS-OLAF

DESCRIPTOR: *ACCIDENTAL SPILLS; *CONTAMINATION; *GROUNDWATER; *HYDROGEOLOGY; MANAGEMENT; *MONITORING; *POLLUTION ABATEMENT; WATER QUALITY

DESCRIPTIVE NOTE: 67-76P.

ABSTRACT: THIS ARTICLE DESCRIBES A MONITORING SYSTEM DESIGNED TO MEET THE SPECIAL NEEDS OF MANAGING ACCIDENTAL SPILLS ALONG EXTENDED ROUTES AND CONTAMINANT DETECTION FROM UNKNOWN SOURCES. TOPICS DISCUSSED INCLUDE: MONITORING IN THE GENERAL POLLUTION CONTROL CONTEXT, CONTAMINANT RELEASE INTO THE ENVIRONMENT, CONTAMINANT PROPAGATION IN SHALLOW AQUIFER SYSTEMS, AND FIELD EXAMPLES AND APPLICATIONS.

AVAILABILITY: GROUND WATER MONITORING REVIEW, V2 N1

IRIS ACCESSION NUMBER: EW007481

PUBLICATION DATE: FEB 82

TITLE: INFILTRATION/INFLOW ANALYSIS: FINDING THE SOURCE.

PERSONAL AUTHOR: HOLMES, KENNETH T.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; CROSS CONNECTIONS; *DETECTION TECHNIQUES; DYED WATER TESTING; *INFILTRATION; *INFLOW; *PERFORMANCE EVALUATION; *SEWER SYSTEMS; *SMOKE TESTING; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 23-24, 26P.

ABSTRACT: THIS ARTICLE DISCUSSES EFFORTS TO IDENTIFY INFILTRATION/INFLOW SOURCES AND TO EVALUATE SEVERAL METHODS OF SOURCE DETECTION. THIS STUDY FOUND THAT, WHILE RELIABLE FOR FINDING INFILTRATION/INFLOW SOURCES, SMOKE TESTING CANNOT BE USED TO QUANTIFY RESULTS WITHOUT LEADING TO EXAGGERATED ESTIMATES. SUPPLEMENTAL DYED-WATER TESTING OFFERED A WAY TO SET MORE REALISTIC I/I FIGURES AND REHABILITATION COSTS.

AVAILABILITY: AMERICAN CITY 8 COUNTY, V97 N2

IRIS ACCESSION NUMBER: EW007482

PUBLICATION DATE: FEB 82

TITLE: SMOKE TESTING: IT'S NOT ALWAYS AS EASY AS IT SEEMS.

PERSONAL AUTHOR: HOLLENBECK, ALAN J.; JANKOVIC, MICHAEL J.

DESCRIPTOR: *INFILTRATION; *INFLOW; *MAINTENANCE; *PERFORMANCE EVALUATION; SAFETY; SANITARY SEWERS; *SEWER SYSTEMS; *SMOKE TESTING; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 24-25P.

ABSTRACT: THIS ARTICLE DISCUSSES VARIOUS ASPECTS OF SMOKE TESTING FOR INFILTRATION/INFLOW SOURCES. THIS ARTICLE REPORTS THAT CLOSE ATTENTION TO THE FIELD PROCEDURE USED FOR SMOKE TESTING OF SANITARY SEWERS WILL HELP LOCATE MANY I/I SOURCES. MAINTENANCE OF SMOKE TESTING EQUIPMENT, SAFETY PRECAUTIONS IN THE FIELD, AND PUBLIC RELATIONS WITH RESIDENTS IS ALSO DISCUSSED.

AVAILABILITY: AMERICAN CITY 8 COUNTY, V97 N2

IRIS ACCESSION NUMBER: EW007483

PUBLICATION DATE: FEB 82

TITLE: TRY CHEMICAL TESTS IF INDUSTRIAL WASTES ARE STRONG.

PERSONAL AUTHOR: BRADSTREET, KENNETH A.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CASE STUDIES; *CHEMICAL DILUTION; *FLOW MEASUREMENT; INDUSTRIAL WASTES; *INFILTRATION; *INFLOW; *PERFORMANCE EVALUATION; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 26-27P.

ABSTRACT: THIS ARTICLE PRESENTS A CASE STUDY OF ATTEMPTS TO EVALUATE AN INFILTRATION/INFLOW PROBLEM WHERE TRADITIONAL FLOW MEASURING TECHNIQUES WOULDN'T WORK. FACED WITH A SURCHARGED SEWER SYSTEM, CONNECTICUT ENGINEERS TURNED TO A CHEMICAL DILUTION FLOW MEASUREMENT METHOD TO FIND OUT HOW MUCH INFILTRATION AND INFLOW WERE ADDING TO A TREATMENT PLANT'S LOAD.

AVAILABILITY: AMERICAN CITY 8 COUNTY, V97 N2

IRIS ACCESSION NUMBER: EW007484

PUBLICATION DATE: FEB 82

TITLE: HOW TO GET SEWER MAINTENANCE UNDER REAL CONTROL.

PERSONAL AUTHOR: MONCK, JOHN W.

DESCRIPTOR: *CASE STUDIES; *INSPECTION; *MAINTENANCE; *MANAGEMENT; MANPOWER UTILIZATION; MONITORING; *OPERATIONS (WASTEWATER); PLANNING; PROBLEM SOLVING; *PROGRAM DESCRIPTIONS; *SCHEDULING; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 29-30P.

ABSTRACT: THIS ARTICLE PRESENTS A CASE STUDY OF HOW ONE CITY DEVELOPED AND MANAGED A SEWER MAINTENANCE PROGRAM. THE STUDY FOUND THAT TO MAXIMIZE PRODUCTION AND MINIMIZE COSTS THE DEPARTMENT HEAD MUST HAVE ACCURATE INFORMATION ON WHICH TO BASE HIS/HER DECISIONS AND FEEDBACK OF RESULTS FOR TIMELY ADJUSTMENTS AND SCHEDULE FLEXIBILITY. INFORMATION COLLECTION, INCLUDING TV INSPECTION, IS DISCUSSED.

AVAILABILITY: AMERICAN CITY 8 COUNTY, V97 N2

IRIS ACCESSION NUMBER: EW007485

PUBLICATION DATE: FEB 82

TITLE: IN-PLACE SEWER RECONSTRUCTION PROVES COST-EFFECTIVE.

PERSONAL AUTHOR: THOMASSON, RICHARD O.

DESCRIPTOR: *CASE STUDIES; *COST EFFECTIVENESS; *EQUIPMENT; *INSITUFORM; *MAINTENANCE; *PERFORMANCE EVALUATION; *PIPES; *SEWER REPLACEMENT; *SEWERS; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 31-32P.

ABSTRACT: THIS ARTICLE DESCRIBES A NEW SEWER REPLACEMENT PROCESS WHICH MINIMIZES EXCAVATION AND SURFACE REPAIRS AND IS HELPING THE WASHINGTON SUBURBAN SANITARY COMMISSION KEEP ITS SEWERS FLOWING IN A COST EFFECTIVE AND TECHNOLOGICALLY SOUND MANNER. THE REPLACEMENT PROCESS IS CALLED "INSITUFORM" AND CONSISTS OF THE INSERTION OF AN IMPERMEABLE, CORROSION-RESISTANT LINING INSIDE EXISTING SEWER MAINS.

AVAILABILITY: AMERICAN CITY 8 COUNTY, V97 N2

IRIS ACCESSION NUMBER: EW007486

PUBLICATION DATE: JAN 82

TITLE: CONSERVING WATER THROUGH PRICING.

PERSONAL AUTHOR: RENSHAW, EDWARD F.

DESCRIPTOR: *CONSERVATION; *COSTS; *ECONOMIC FACTORS; *MANAGEMENT; *POTABLE WATER; *RATE STRUCTURES; *WATER RATES; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 2-5P.

ABSTRACT: CONSERVING TREATED WATER AS AN ECONOMIC ALTERNATIVE TO INCREASING CAPACITY IS RECEIVING MORE AND MORE SERIOUS ATTENTION. THE EFFECT OF CHARGING PROGRESSIVELY HIGHER RATES FOR HIGH USAGE, ESPECIALLY USAGE BY INDUSTRIES, IS UNACCEPTABLE AND WOULD FORCE BUSINESSES THAT FORM THE ECONOMIC BASE OF SOME COMMUNITIES TO RELOCATE. THE AUTHOR OF THIS ARTICLE PROPOSES AN IMAGINATIVE WATER EXCISE TAX TO ENCOURAGE CONSERVATION BY CONSUMERS OF BOTH LARGE AND SMALL QUANTITIES. FOR INSTANCE, PROPERTY TAXES ON BUSINESSES COULD BE LOWERED TO COMPENSATE FOR HIGHER WATER RATES. THE PROGRAM COULD ALSO BE DESIGNED TO INCLUDE REBATES TO NONPROFIT INSTITUTIONS AND NEEDY HOUSEHOLDS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007487

PUBLICATION DATE: JAN 82

TITLE: MARGINAL COST AND SEASONAL PRICING OF WATER SERVICE.

PERSONAL AUTHOR: MANN, PATRICK C.; SCHLENGER, DONALD L.

DESCRIPTOR: *CONSERVATION; *COSTS; *ECONOMIC FACTORS; *MANAGEMENT; *POTABLE WATER; *RATE STRUCTURES; *SEASONAL RATES; *WATER RATES; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 6-11P.

ABSTRACT: ALTHOUGH MANY DIFFICULTIES ARE INVOLVED IN APPLYING ECONOMIC THEORY TO WATER RATE DESIGN, INNOVATIVE PRICING SHOULD BE UNDERSTOOD AND CONSIDERED BY WATER UTILITY MANAGERS. THIS ARTICLE DEFINES THE PROBLEMS ASSOCIATED WITH IMPLEMENTING RATES BASED ON MARGINAL COST (I.E., THE OPERATING COSTS ASSOCIATED WITH CHANGING RATES OF USE OF EXISTING CAPACITY OR THE COSTS OF EXPANDING TREATMENT CAPACITY AND THE CHANGES IN OPERATING COSTS CAUSED BY SEASONAL HIGH DEMAND. THE ADVANTAGE OF SUCH PRICING IS THAT CUSTOMERS ARE CHARGED PRICES REFLECTING THE COST OF THEIR USAGE DECISIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007488

PUBLICATION DATE: JAN 82

TITLE: COSTS FOR SMALL SYSTEMS TO MEET THE NATIONAL INTERIM DRINKING WATER REGULATIONS.

PERSONAL AUTHOR: STEVIE, RICHARD G.; CLARK, ROBERT M.

DESCRIPTOR: *COSTS; *DRINKING WATER; *ECONOMIC FACTORS; *REGULATIONS; *SMALL SYSTEMS; *STANDARDS; *UTILITIES; WATER RESOURCES; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 13-17P.

ABSTRACT: BECAUSE SMALL WATER UTILITIES--THOSE SERVING FEWER THAN 10,000 PEOPLE--CANNOT MAKE SCALE ECONOMIES, THE COSTS OF MEETING THE NATIONAL INTERIM PRIMARY DRINKING WATER REGULATIONS (NIPDWR) WILL HAVE A GREATER EFFECT ON EACH CUSTOMER OF THESE UTILITIES THAN ON THOSE SERVED BY LARGE UTILITIES. THIS ARTICLE REPORTS ON A SURVEY THAT IDENTIFIED SOME TYPICAL SMALL UTILITIES, STUDIED THE ADDITIONAL TREATMENT PROCESSES THESE UTILITIES WOULD HAVE TO INSTITUTE TO MEET THE REGULATIONS, AND ESTIMATED THE UNIT COSTS OF THE REQUIRED TREATMENT. THE ECONOMIC IMPACT OF THE REGULATIONS ON THE 95 PERCENT OF ALL WATER UTILITIES THAT ARE CLASSIFIED AS "SMALL" WILL FORCE MORE RESEARCH ON THE CONSEQUENCES OF THE NIPDWR AND WILL REQUIRE CLOSE COOPERATION BETWEEN WATER SUPPLIERS AND FEDERAL, STATE, AND LOCAL GOVERNMENTS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007489

PUBLICATION DATE: JAN 82

TITLE: A SPATIAL COSTING SYSTEM FOR DRINKING WATER.

PERSONAL AUTHOR: CLARK, ROBERT M.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; COMPUTER APPLICATIONS; *COSTS; *DATA COLLECTION; *DRINKING WATER; *ECONOMIC FACTORS; *MANAGEMENT; *MODELING; REGULATIONS; STANDARDS; UTILITIES; *WATER SUPPLY; *WATER TREATMENT; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 18-26P.

ABSTRACT: THE COSTING SYSTEM DESCRIBED IN THIS ARTICLE WAS FIRST TESTED THEORETICALLY BY COMPUTER MODEL AND THEN APPLIED IN A CASE STUDY TO THE KENTON COUNTY (KY) WATER DISTRICT 1. THE OBJECTIVES WERE TO ISOLATE THE COSTS ASSOCIATED WITH TREATMENT MODIFICATIONS, PARTICULARLY THOSE NECESSARY TO MEET THE REQUIREMENTS OF THE SAFE DRINKING WATER ACT. THE AUTHORS FOUND THAT MOST WATER UTILITIES KEEP FINANCIAL RECORDS FOR ACCOUNTING PURPOSES ONLY, WITH LITTLE OR NO MEANS OF CATEGORIZING COSTS. THE TECHNIQUE DESCRIBED IN THIS ARTICLE PROVIDES A MEANS OF COLLECTING THE DATA NEEDED FOR COMPREHENSIVE COST ANALYSES, MANAGERIAL INFORMATION, AND FINANCIAL REPORTING TO THE PUBLIC. COSTS AND SUBCOSTS ASSOCIATED WITH THE ACQUISITION, TREATMENT, AND DELIVERY OF DRINKING WATER CAN BE IDENTIFIED. THE SUCCESS OF THE CASE STUDY INDICATES ITS SUITABILITY TO THE NEEDS OF OTHER WATER SYSTEMS, SOME OF WHICH ARE CURRENTLY INSTITUTING THE MODEL COSTING SYSTEM.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007490

PUBLICATION DATE: JAN 82

TITLE: FINAL REPORT ON METRIC UNITS AND SIZES.

DESCRIPTOR: *GUIDELINES; *MEASUREMENTS; *METRIC SYSTEM; *SPECIFICATIONS; *STANDARDS; TERMINOLOGY; *WATER DISTRIBUTION; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 27-33P.

ABSTRACT: THIS UPDATED REPORT OF THE METRICATION COMMITTEE INCORPORATES COMMENTS AND DEVELOPMENTS THAT HAVE OCCURRED SINCE THE FIRST REPORT WAS PUBLISHED IN THE FEBRUARY 1978 JOURNAL. THE SUBJECT OF THE REPORT DIRECTLY AFFECTS STANDARDS AND HAS BEEN APPROVED BY THE STANDARDS COUNCIL AS WELL AS THE TECHNICAL AND PROFESSIONAL COUNCIL.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007491

PUBLICATION DATE: JAN 82

TITLE: LABORATORY TESTING OF OZONATION SYSTEMS PRIOR TO PILOT-PLANT OPERATIONS.

PERSONAL AUTHOR: CHROSTOWSKI, PAUL C.; AND OTHERS

DESCRIPTOR: *DESIGN; *DISINFECTION; HEALTH EFFECTS; *LABORATORY TESTING; *OZONATION; *OZONE; PRETREATMENT; *RESEARCH REPORTS; *WATER TREATMENT

DESCRIPTIVE NOTE: 38-43P.

ABSTRACT: OZONATION HAS BEEN USED EMPIRICALLY IN WATER TREATMENT PROCESSES SINCE THE TURN OF THE CENTURY EVEN THOUGH CONCEPTS RELATING TO THE PROPERTIES OF OZONE ARE NOT WIDELY UNDERSTOOD. IF OZONATION IS UNDER CONSIDERATION AS PART OF A WATER UTILITY'S TREATMENT TRAIN, A RATIONAL DESIGN METHOD IS NECESSARY FOR AN OPTIMUM SYSTEM TAILORED TO THE PARTICULAR SYSTEM'S WATER SOURCE. THE EXPERIMENTAL PROTOCOL REPORTED IN THIS ARTICLE, FOUND BY BENCH-SCALE EXPERIMENTS, CAN LEAD TO A COHERENT DESIGN FOR AN OZONATION SYSTEM AS WELL AS A MEANS OF PREDICTING THE EFFECTS OF OZONE ON A PARTICULAR WATER SUPPLY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007492

PUBLICATION DATE: JAN 82

TITLE: WATER REUSE PLANNING BY MEANS OF AN INPUT-OUTPUT TABLE.

PERSONAL AUTHOR: KLOOZ, DANIEL; HENDRICKS, DAVID W.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CASE STUDIES; *CONSERVATION; *INPUT-OUTPUT MODELS; *PLANNING; *RESEARCH REPORTS; *RECYCLING; WATER DEMAND; *WATER RESOURCES; *WATER REUSE; *WATER SUPPLY

DESCRIPTIVE NOTE: 51-56P.

ABSTRACT: WATER REUSE FOR BOTH POTABLE AND NONPOTABLE NEEDS HAS ALWAYS BEEN PRACTICED, PARTICULARLY IN THE SEMI-ARID WEST. THE AUTHORS OF THIS ARTICLE HAVE DEVELOPED AN ORDERLY FORMAT SO THAT COMPLEX WATER SYSTEMS CAN BE EASILY UNDERSTOOD BOTH STRUCTURALLY AND OPERATIONALLY. NEW PROJECTS CAN BE EVALUATED IN TERMS OF MEETING NEW DEMANDS AND THEIR EFFECTS ON THE REMAINDER OF THE SYSTEM. THE INPUT-OUTPUT TABLE PROVIDES A SIMPLE MEANS OF UNDERSTANDING A COMPLETE WATER RESOURCE SYSTEM SO THAT THE MOST APPROPRIATE REUSE OPPORTUNITIES CAN BE COMPARED AND IDENTIFIED. THE TABLE WOULD ALSO BE A USEFUL TOOL IN REACHING AGREEMENT AMONG VARIOUS WATER USERS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007493

PUBLICATION DATE: FEB 82

TITLE: THE COST AND EFFECTIVENESS OF PUBLIC NOTIFICATION OF MCL VIOLATIONS.

PERSONAL AUTHOR: STEGMAN, CHARLES E.; SCHNEIDER, GEORGIA

DESCRIPTOR: *COST EFFECTIVENESS; *DRINKING WATER; *MAXIMUM CONTAMINANT LEVELS; PUBLIC NOTIFICATION; *PUBLIC RELATIONS; *SAFE DRINKING WATER ACT; *STANDARDS; *STATISTICS; SURVEYS; *VIOLATIONS; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 59-65P.

ABSTRACT: A STATISTICAL STUDY OF THE PUBLIC NOTIFICATION REQUIREMENTS OF THE SAFE DRINKING WATER ACT (SDWA) WAS PERFORMED TO OBTAIN COST INFORMATION ON SPECIFIC METHODS OF NOTIFICATION OF BACTERIOLOGIC AND TURBIDITY VIOLATIONS OF MAXIMUM CONTAMINANT LEVELS. THE SURVEY ALSO TABULATED THE EFFECTIVENESS OF PUBLIC NOTIFICATION IN GAINING CITIZEN SUPPORT FOR UPGRADING TREATMENT FACILITIES. INFORMATION FURNISHED BY OPERATORS OF 164 SMALL, MEDIUM-SIZED, AND LARGE WATER SYSTEMS LOCATED IN 14 STATES WAS ASSEMBLED FOR THIS COMPREHENSIVE ANALYSIS OF THE PUBLIC NOTIFICATION PROVISIONS IN THE SDWA.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N2

IRIS ACCESSION NUMBER: EW007494

PUBLICATION DATE: FEB 82

TITLE: PLANNING MAINTENANCE MANAGEMENT.

PERSONAL AUTHOR: BURNEY, CHRISTOPHER M.

DESCRIPTOR: *CASE STUDIES; *EQUIPMENT; *GUIDELINES; *MAINTENANCE; *MANAGEMENT; *PLANNING; *PROGRAM ADMINISTRATION; *PROGRAM DESCRIPTIONS; *UTILITIES

DESCRIPTIVE NOTE: 67-71P.

ABSTRACT: PREVENTIVE MAINTENANCE PROGRAMS, IF THEY ARE TO

BE COST-EFFECTIVE, MUST BE PLANNED WITH SPECIFIC GOALS IN MIND. IF THERE IS NO MORE THAN A SIMPLE ATTEMPT TO REDUCE IN-SERVICE EQUIPMENT FAILURE BY INSPECTION AND REPAIR, A BASIC PROGRAM IS IN OPERATION. THIS ARTICLE DEFINES PREVENTIVE MAINTENANCE, DESCRIBES HOW TO USE MANUAL AND AUTOMATED SYSTEMS, AND GIVES PRACTICAL EXAMPLES OF HOW THE NEW HAVEN (CONN.) WATER COMPANY'S MAINTENANCE PROGRAM OPERATES. A WELL-PLANNED PROGRAM CAN RESULT IN WHAT THE AUTHOR CALLS "MAINTENANCE PREVENTION."

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N2

IRIS ACCESSION NUMBER: EW007495

PUBLICATION DATE: FEB 82

TITLE: COMMUNICATING WITH WATER UTILITY CUSTOMERS.

PERSONAL AUTHOR: KUTCHINS, KAY

DESCRIPTOR: *COMMUNICATIONS; *COMMUNITY INVOLVEMENT; *CONSUMER AFFAIRS; *GUIDELINES; *MANAGEMENT; *PROGRAM ADMINISTRATION; *PUBLIC RELATIONS; REGULATIONS; *UTILITIES; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 72-77P.

ABSTRACT: COMMUNICATION, BY THE AUTHOR'S DEFINITION, IS THE PROCESS OF TRANSFERRING AN IDEA OR A THOUGHT FROM ONE PERSON'S MIND TO ANOTHER'S. MOST WATER UTILITIES HAVE NEVER GONE BEYOND ISSUING INFORMATION, WHICH IS NO LONGER ADEQUATE COMMUNICATION. CONSEQUENTLY, MOST CONSUMERS IGNORE OR TAKE THEIR WATER SUPPLIERS FOR GRANTED. THE AUTHOR OF THIS ARTICLE HAS SPECIFIC SUGGESTIONS THAT MANAGEMENT CAN EASILY ADOPT TO IMPROVE COMMUNITY RELATIONS AND SUPPORT FOR THE WATER INDUSTRY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N2

IRIS ACCESSION NUMBER: EW007496

PUBLICATION DATE: FEB 82

TITLE: PROCEDURES FOR ANALYZING ORGANIC CONTAMINANTS IN DRINKING WATER.

PERSONAL AUTHOR: BRASS, HERBERT J.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CONTAMINANTS; *DRINKING WATER; *EPA; *GAS CHROMATOGRAPHY; *LABORATORY PROCEDURES; *ORGANIC COMPOUNDS; *RESEARCH REPORTS; *STANDARDS; *WATER SUPPLY; *WATER QUALITY; WATER TREATMENT

DESCRIPTIVE NOTE: 107-112P.

ABSTRACT: WATER UTILITIES MUST BE KNOWLEDGEABLE ABOUT THE METHODS, EQUIPMENT, AND EXPERTISE NEEDED TO MEET THE STANDARDS USEPA SETS FOR THE CONTROL OF ORGANIC CHEMICALS IN DRINKING WATER. THIS ARTICLE DISCUSSES THE LEVELS OF ORGANIC CONTAMINANTS THAT ARE DETECTABLE WITH CURRENTLY AVAILABLE EQUIPMENT AND THE ADVANTAGES AND DISADVANTAGES OF ALTERNATIVE TECHNIQUES. GAS CHROMATOGRAPHY PROVIDES A GREATER DEGREE OF CERTAINTY IN IDENTIFYING COMPOUNDS THAN CONVENTIONAL DETECTORS. USEPA IS DEVELOPING A LABORATORY CERTIFICATION PROGRAM FOR THE PERSONNEL WHO WILL BE RESPONSIBLE FOR ANALYZING REGULATED COMPOUNDS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N2

IRIS ACCESSION NUMBER: EW007497

PUBLICATION DATE: FEB 82

TITLE: PORTABLE WATER--WASTES LABORATORY HIGHLIGHTS BENEFITS OF NEW NITROGEN ANALYZING SYSTEMS.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *KJELDAHL ANALYSIS; *LABORATORY EQUIPMENT; *LABORATORIES; *NITROGEN; *TESTING; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 34 NEWS-36 NEWSP.

ABSTRACT: THIS ARTICLE REPORTS ON THE USE OF A NEW NITROGEN ANALYZING SYSTEM FOR PORTABLE LABORATORIES. THE BUCHI-BRINKMAN KJELDAHL NITROGEN ANALYZER IS A HOODLESS, TABLE-TOP SYSTEM THAT FEATURES PUSH-BUTTON OR FULLY AUTOMATED OPERATION, A 50 PERCENT REDUCTION IN SIZE, MUCH GREATER SPEED, ENHANCED SAFETY, ENERGY CONSERVATION, AND THE INCLUSION OF BUILT-IN WATER AND BASE RESERVOIRS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N2

IRIS ACCESSION NUMBER: EW007498

PUBLICATION DATE: FEB 82

TITLE: ANODIC STRIPPING VOLTAMMETRY AS AN ANALYTICAL TOOL.

PERSONAL AUTHOR: WANG, JOSEPH

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANODIC STRIPPING VOLTAMMETRY; *ELECTROANANALYTICAL TECHNIQUES; *HEAVY METALS; *LABORATORY TECHNIQUES; *MEASUREMENTS; *PERFORMANCE EVALUATION; *TRACE METALS; *WATER QUALITY

DESCRIPTIVE NOTE: 104A-109AP.

ABSTRACT: THIS ARTICLE EXAMINES IN DETAIL THE TECHNIQUE OF ANODIC STRIPPING VOLTAMMETRY. SPECIFIC ATTENTION IS FOCUSED ON ITS USE IN DETECTING TRACE METALS IN WATER SAMPLES AND OTHER APPLICATIONS IN ENVIRONMENTAL SURVEILANCE. THE BASIC WORKING PRINCIPLES BEHIND ANODIC STRIPPING MEASUREMENTS ARE ALSO DISCUSSED.

AVAILABILITY: ENVIRONMENTAL SCIENCE 8 TECHNOLOGY, V16 N3

IRIS ACCESSION NUMBER: EW007499

PUBLICATION DATE: FEB 82

TITLE: ACID PRECIPITATION IN HISTORICAL PERSPECTIVE.

PERSONAL AUTHOR: COWLING, ELLIS B.

DESCRIPTOR: *ACID PRECIPITATION; *CLIMATOLOGY; *ECOLOGY; *ENVIRONMENTAL IMPACTS; *HISTORY; *PUBLIC OPINION; *RESEARCH; SCIENCE; SCIENTIFIC RESEARCH; *STATE-OF-THE-ART REVIEWS

DESCRIPTIVE NOTE: 110A-123AP.

ABSTRACT: THIS ARTICLE REVIEWS VARIOUS STEPS IN THE TRANSFORMATION OF THE CONCEPTS OF ACID PRECIPITATION FROM THE DOMAIN OF SCIENTIFIC CURIOSITY TO THE DOMAIN OF PUBLIC CONCERN AND DEBATE. AMONG THE ISSUES EXAMINED ARE HOW THE TRANSITION OCCURRED, WHO WAS RESPONSIBLE, AND WHAT FACTORS OF SCIENTIFIC AWARENESS AND PUBLIC PERCEPTION HAVE INFLUENCED THE COURSE OF RESEARCH ON ACID PRECIPITATION.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V16 N2

IRIS ACCESSION NUMBER: EW007500

PUBLICATION DATE: FEB 82

TITLE: TRACE ANALYSIS OF THE DIOXINS.

PERSONAL AUTHOR: KARASEK, F. W.; ONUSKA, F. I.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; CHEMISTRY; *DIOXINS; GAS CHROMATOGRAPHY; *HAZARDOUS MATERIALS; *LABORATORY TECHNIQUES; *TOXIC SUBSTANCES; *TRACE ANALYSIS

DESCRIPTIVE NOTE: 309A-324AP.

ABSTRACT: THE ANALYTICAL CHEMISTRY OF THE POLYCHLORINATED DIBENZO-P-DIOXINS, OF INTEREST DUE TO THEIR HIGH TOXICITY, IS DESCRIBED IN THIS ARTICLE. TOPICS ADDRESSED INCLUDE: RADIOIMMUNOASSAY SCREENING METHOD; GAS CHROMATOGRAPHY WITH ELECTRON CAPTURE; THE GC/MS TECHNIQUE USING HIGH-RESOLUTION GC (HRGC) AND LOW-RESOLUTION MS (LRMS); ULTRATRACE ANALYSIS; AND NEW ANALYTICAL TECHNIQUES.

AVAILABILITY: ANALYTICAL CHEMISTRY, V54 N2

IRIS ACCESSION NUMBER: EW007501

PUBLICATION DATE: FEB 82

TITLE: LC DETECTORS - THE SEARCH IS ON FOR THE ULTIMATE DETECTOR.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; *DETECTION; *INSTRUMENTATION; *LABORATORY TECHNIQUES; *LIQUID CHROMATOGRAPHY; *RESEARCH REPORTS; *STATE-OF-THE-ART REVIEWS; *SYMPOSIA; *TECHNOLOGICAL ADVANCEMENTS

DESCRIPTIVE NOTE: 327A-332AP.

ABSTRACT: THIS ARTICLE PRESENTS THE PROGRESS OF RESEARCH IN THE DEVELOPMENT OF NEW LIQUID CHROMATOGRAPHY (LC) DETECTORS AND THE STATE OF THE ART OF CURRENTLY AVAILABLE SYSTEMS, AS DISCUSSED AT THE 20TH EASTERN ANALYTICAL SYMPOSIUM (NEW YORK CITY, NOVEMBER, 1981). TOPICS ADDRESSED INCLUDE: OPTICAL DETECTORS, LC/MS, ELECTROCHEMICAL DETECTION, LC/NMR, LC/FTIR, AND PRECOLUMN AND POSTCOLUMN REACTIONS.

AVAILABILITY: ANALYTICAL CHEMISTRY, V54 N2

IRIS ACCESSION NUMBER: EW007502

PUBLICATION DATE: FEB 82

TITLE: ELECTRONICS, INSTRUMENTATION, AND MICROCOMPUTERS - PRINCIPALS AND PRACTICE FOR THE MICROCIRCUIT AGE.

PERSONAL AUTHOR: ENKE, C. G.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; *CHEMISTRY; *ELECTRONICS; *INSTRUMENTATION; *LABORATORY EQUIPMENT; *MICROCIRCUITS; *MICROCOMPUTERS; *STATE-OF-THE-ART REVIEWS; *TECHNOLOGICAL ADVANCEMENTS

DESCRIPTIVE NOTE: 367A-393AP.

ABSTRACT: THIS ARTICLE PRESENTS A NEW PERSPECTIVE ON ELECTRONICS AND SCIENTIFIC INSTRUMENTATION AS THEY RELATE TO THE IMPACT OF MICROCIRCUITS ON CHEMICAL INSTRUMENTATION. TOPICS ADDRESSED INCLUDE: FUNCTIONAL NATURE OF MICROCIRCUITS; DIGITAL, ANALOG, AND TIME DOMAIN MICROCIRCUITS; MICROCIRCUITS IN THE LABORATORY; REFERENCE MATERIALS; JOB BOARDS; AND FUTURE ADVANCEMENTS.

AVAILABILITY: ANALYTICAL CHEMISTRY, V54 N2

IRIS ACCESSION NUMBER: EW007503

PUBLICATION DATE: FEB 82

TITLE: LAND DISPOSAL OF SLUDGE.

PERSONAL AUTHOR: CORMACK, JACK W.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *LAND APPLICATION; LANDFILLS; LAND SPREADING; MONITORING; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; SITE SELECTION; *SLUDGE; SEWAGE; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 42-44P.

ABSTRACT: THIS ARTICLE REPORTS HOW THE LAKE COUNTY, ILLINOIS SANITARY DISTRICT USES LANDFILLING AND LAND SPREADING TECHNIQUES FOR AN ECONOMICALLY AND ENVIRONMENTALLY SOUND MEANS OF SEWAGE SLUDGE DISPOSAL. INFORMATION IS PRESENTED ON SITE SELECTION, OPERATIONS, AND MONITORING.

AVAILABILITY: PUBLIC WORKS, V113 N2

IRIS ACCESSION NUMBER: EW007504

PUBLICATION DATE: FEB 82

TITLE: WINNING THE PUBLIC TO ENERGY CONSERVATION.

PERSONAL AUTHOR: BOSCH, MARY; DEBO, THOMAS N.

DESCRIPTOR: *ATTITUDES; *CASE STUDIES; *CONSERVATION; FLOW RESTRICTORS; *GEORGIA; PLANNING; *PROGRAM DESCRIPTIONS; *PUBLIC OPINION; RESIDENTIAL USES; *SURVEYS; *WATER CONSERVATION; *WATER RESOURCES; *WATER USE

DESCRIPTIVE NOTE: 48-49P.

ABSTRACT: THIS ARTICLE DISCUSSES THE EXPERIENCES THAT ATLANTA, GEORGIA WATER OFFICIALS HAD WITH THE "LOW COST/NO COST RESIDENTIAL CONSERVATION PROGRAM." INCLUDED ARE RESULTS OF A PUBLIC SURVEY ASSESSING ATTITUDES AND WILLINGNESS TO PARTICIPATE IN A WATER CONSERVATION PROGRAM. PROGRAM RECOMMENDATIONS AND MARKETING STRATEGIES ARE ALSO DISCUSSED.

AVAILABILITY: PUBLIC WORKS, V113 N2

IRIS ACCESSION NUMBER: EW007505

PUBLICATION DATE: FEB 82

TITLE: FIRST TRIPLE-USE STRUCTURE FOR ELEVATED WATER STORAGE.

PERSONAL AUTHOR: GRAHAM, JACK M.

DESCRIPTOR: *ARCHITECTURE; *CONSTRUCTION; *DESIGN; *ELEVATED RESERVOIRS; *LAND USE; *PLANNING; *RESERVOIRS; *WATER STORAGE

DESCRIPTIVE NOTE: 50-51P.

ABSTRACT: THIS ARTICLE REPORTS ON THE CONSTRUCTION OF AN ELEVATED WATER STORAGE RESERVOIR THAT ALSO HOUSES A FIRE STATION AND OFFICE SPACE. THIS TWO MILLION GALLON STORAGE FACILITY HAS WON PRIZES FOR APPEARANCE AND HAS SERVED A MULTIPLE PURPOSE FOR HALTOM CITY, TEXAS.

AVAILABILITY: PUBLIC WORKS, V113 N2

IRIS ACCESSION NUMBER: EW007506

PUBLICATION DATE: FEB 82

TITLE: SUBMERSIBLE MIXERS HELP WASTEWATER PLANT COPE WITH DISPOSAL OF SLUDGE.

DESCRIPTOR: *CASE STUDIES; *EQUIPMENT; *FACILITIES; *MIXERS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SUBMERSIBLE MIXERS; SLUDGE; *SLUDGE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 56-57P.

ABSTRACT: THIS ARTICLE REPORTS ON THE USE OF SUBMERSIBLE MIXERS IN SLUDGE STORAGE TANKS. IN TESTS AT THE CITY OF DETROIT WASTEWATER TREATMENT PLANT THE SUBMERSIBLE MIXERS KEPT SLUDGE CHARACTERISTICS MORE UNIFORM AND ASSISTED OVERALL FILTRATION OPERATIONS.

AVAILABILITY: PUBLIC WORKS, V113 N2

IRIS ACCESSION NUMBER: EW007507

PUBLICATION DATE: FEB 82

TITLE: ON-SITE STORMWATER DETENTION: AN OVERVIEW.

PERSONAL AUTHOR: MASON, JOHN M.

DESCRIPTOR: *DESIGN; *ECONOMIC FACTORS; *FLOODS; METHODS; *ONSITE DETENTION; *PERFORMANCE EVALUATION; POLLUTION CONTROL; *RUNOFF; STORAGE FACILITIES; *STORMWATER; *URBAN AREAS; *WATER STORAGE; *WASTEWATER COLLECTION; *WATER COLLECTION

DESCRIPTIVE NOTE: 62-64P.

ABSTRACT: THIS ARTICLE DISCUSSES AREAS OF CONCERN AND METHODS OF CONTROLLING URBAN STORMWATER DRAINAGE. RUNOFF STORAGE TECHNIQUES DISCUSSED INCLUDE: DRY PONDS, WET PONDS, PARKING LOTS, SHALLOW SURFACE CATCHMENTS, SUBSIDARY FILL IMPOUNDMENTS, ROOFTOP PONDING, TRENCH STORAGE, PIPE STORAGE, CISTERN STORAGE, TUNNEL-RESERVOIR STORAGE, DRY WELLS, AND INFILTRATION TRENCHES. OUTLET STRUCTURES AND ECONOMIC ASPECTS ARE ALSO DISCUSSED.

AVAILABILITY: PUBLIC WORKS, V113 N2

IRIS ACCESSION NUMBER: EW007508

PUBLICATION DATE: FEB 82

TITLE: APPARATUS NEEDS AND COSTS FOR MONITORING PRIORITY POLLUTANTS.

PERSONAL AUTHOR: VICORY, ALAN H.; MALINA, JOSEPH F., JR.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *COSTS; EFFLUENTS; *EQUIPMENT; *HAZARDOUS MATERIALS; *LABORATORY PROCEDURES; *MONITORING; *PRIORITY POLLUTANTS; *SAMPLING; *TOXIC SUBSTANCES; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 125-128P.

ABSTRACT: THIS REPORT WAS DEVELOPED BY THE WPCF TOXIC SUBSTANCES COMMITTEE TO IDENTIFY THE EQUIPMENT AND RESOURCES REQUIRED FOR MONITORING TOXIC MATERIALS IN WASTEWATER EFFLUENTS AND NATURAL WATER SYSTEMS. THE SAMPLING COSTS FOR

MONITORING THE 127 PRIORITY POLLUTANTS ARE ALSO ESTIMATED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2

IRIS ACCESSION NUMBER: EW007509

PUBLICATION DATE: FEB 82

TITLE: RELIABILITY AND STABILITY OF TRICKLING FILTER PROCESSES.

PERSONAL AUTHOR: NIKU, SALAR; AND OTHERS

DESCRIPTOR: ACTIVATED SLUDGE; *BOD; *DESIGN; EFFLUENTS; *FACILITIES; *MODELING; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *STATISTICAL ANALYSIS; SUSPENDED SOLIDS; *TRICKLING FILTERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 129-134P.

ABSTRACT: EFFLUENT BOD AND SUSPENDED SOLIDS CONCENTRATION DATA FROM 11 TRICKLING FILTER PLANTS WERE ANALYZED TO DETERMINE WHETHER TRICKLING FILTER DATA HAVE THE SAME STATISTICAL CHARACTERISTICS AS THE DATA OF ACTIVATED SLUDGE PROCESSES. LOGNORMAL DISTRIBUTION REASONABLY FITS REPORTED EFFLUENT BOD AND SUSPENDED SOLIDS DATA OF TRICKLING FILTERS. BECAUSE THE PREVIOUS RELIABILITY AND STABILITY MODELS DEVELOPED FOR ACTIVATED SLUDGE PROCESSES ALSO FIT TRICKLING FILTER DATA QUITE WELL, THOSE MODELS MAY BE USED EITHER IN DESIGNING A TRICKLING FILTER PROCESS EXPECTED TO PERFORM AT A CERTAIN RELIABILITY OR TO ESTIMATE THE RELIABILITY AND STABILITY OF A TRICKLING FILTER PLANT ALREADY IN OPERATION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2

IRIS ACCESSION NUMBER: EW007510

PUBLICATION DATE: FEB 82

TITLE: KINETIC MODELING OF THE OZONATION OF PHENOL IN WATER.

PERSONAL AUTHOR: ROTH, JOHN A.; AND OTHERS

DESCRIPTOR: *CHEMICAL REACTIONS; *KINETICS; *MATHEMATICAL MODELING; *OZONATION; *OZONE; *PHENOLS; *REACTION KINETICS; *RESEARCH REPORTS; *STOICHIOMETRY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 135-139P.

ABSTRACT: A MODEL OF THE GAS-LIQUID REACTION RATE BETWEEN OZONE AND PHENOL FROM BENCH-SCALE PROTOTYPE STUDIES IS PRESENTED. CONSISTENT WITH RESULTS IN THE LITERATURE, THE EXPERIMENTAL DATA SHOW FIRST-ORDER DEPENDENCE WITH RESPECT TO PHENOL. THE MODEL WAS FIT TO DATA OBTAINED FROM BOTH SEMI-BATCH MODE AND CONTINUOUS STIRRED TANK REACTOR MODE OPERATION. PARAMETERS FOR THIS MODEL, OBTAINED BY REANALYSIS OF OTHER INVESTIGATORS' DATA, COMPARED WELL WITH THE RESULTS OF THIS INVESTIGATION. AN OVERALL STOICHIOMETRIC RELATIONSHIP, DEVELOPED FROM THE CONTINUOUS STIRRED TANK REACTOR EXPERIMENTS, WAS CONSISTENT WITH THE LITERATURE RESULTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2

IRIS ACCESSION NUMBER: EW007511

PUBLICATION DATE: FEB 82

TITLE: DISINFECTION EFFICIENCIES OF CHLORINE AND CHLORINE DIOXIDE IN A GRAVITY FLOW CONTACTOR.

PERSONAL AUTHOR: LONGLEY, KARL E.; AND OTHERS

DESCRIPTOR: *CHLORINATION; *CHLORINE; *CHLORINE DIOXIDE; *CONTACTORS; *DISINFECTION; *FECAL COLIFORMS; *OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 140-145P.

ABSTRACT: A GRAVITY FLOW CONTACTOR WAS STUDIED TO DETERMINE ITS CAPABILITY FOR REDUCING FECAL COLIFORMS AND COLIPHAGES INDIGENOUS TO WASTEWATER BY USING EITHER CHLORINE OR CHLORINE DIOXIDE AS THE DISINFECTANT. FECAL COLIFORM AND COLIPHAGE INACTIVATION CURVES FOR BOTH CHLORINE DIOXIDE AND CHLORINE WERE BIPHASIC, WITH MOST OF THE INACTIVATION OCCURRING WITHIN 3 MINUTES. CHLORINE DIOXIDE DEMONSTRATED SUPERIOR INACTIVATION OF COLIPHAGE AND PRODUCED SIGNIFICANTLY LOWER RESIDUALS. IF RESIDUALS MUST BE REDUCED TO ZERO, A SAVINGS IN THE AMOUNT OF REQUIRED REDUCING CHEMICAL CAN BE REALIZED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2

IRIS ACCESSION NUMBER: EW007512

PUBLICATION DATE: FEB 82

TITLE: IMPROVED THERMAL SLUDGE CONDITIONING BY TREATMENT WITH ACIDS AND BASES.

PERSONAL AUTHOR: ALSOP, G. MICHAEL; CONWAY, RICHARD A.

DESCRIPTOR: *ACIDS; *BASES; *CHEMICAL REACTIONS; *DEWATERING; ECONOMIC FACTORS; FLOCCULATION; HEAT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE; *SLUDGE CONDITIONING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 146-152P.

ABSTRACT: TO PREPARE SLUDGE FOR DEWATERING, A PROCESSING SEQUENCE OF BASIC CONDITIONS FOLLOWED BY ACIDIC CONDITIONS AVOIDS THE DRAWBACKS WHILE RETAINING THE ADVANTAGES OF CONVENTIONAL HEAT TREATMENT. CONDITIONS ARE OPTIMIZED FOR

EACH SLUDGE. THE FIRST STEP PRESUMABLY EXTRACTS POLYMERS FROM THE CELLS, WHEREAS THE SECOND MODIFIES THE CELL SURFACE AND CAUSES FLOCCULATION USING THE EXTRACTED POLYMERS. THE FOLLOWING ARE KEY FEATURES AND ADVANTAGES OF THIS PROCESSING SEQUENCE: (1) TEMPERATURE, PRESSURE, AND REACTION TIME ARE MUCH LESS THAN IN CONVENTIONAL HEAT TREATMENT (ORGANIC SOLUBILIZATION IS NOT A PROBLEM); (2) DISINFECTION CAN BE ACCOMPLISHED; (3) THE SLUDGE IS WELL CONDITIONED (FOR EXAMPLE, DEWATERING AT LOW PRESSURES 20.7 TO 34.5 KN/M2, 3 TO 5 PSIG ON A BELT PRESS TO 20 TO 30% SOLIDS IS POSSIBLE); (4) CONDITIONS MAY BE ADJUSTED TO ACCOMMODATE A RANGE OF DIFFICULT-TO-DEWATER BIOLOGICAL SLUDGES; (5) COAGULANTS AND INERTS ARE NOT ADDED; (6) CONDITIONING OPERATION IS CLOSED, AND CONDITIONED SLUDGE CAN BE STORED WITHOUT ODORS; AND (7) SOME METALS REDUCTION, ESPECIALLY OF CADMIUM, RESULTS. PRELIMINARY ECONOMIC STUDIES ALSO INDICATE FAVORABLE OPERATING COSTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2

IRIS ACCESSION NUMBER: EW007513

PUBLICATION DATE: FEB 82

TITLE: TREATMENT OF CYANIDE WASTE BY THE EXTENDED AERATION PROCESS.

PERSONAL AUTHOR: GAUDY, A. F.; AND OTHERS

DESCRIPTOR: *AERATION; *CYANIDE; *EXTENDED AERATION; *METABOLISM; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE; SLUDGE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 153-164P.

ABSTRACT: CYANIDE, AT 10, 15, AND 20 MG/L, WAS FED WITH READILY DEGRADABLE SYNTHETIC WASTE TO LABORATORY-SCALE EXTENDED AERATION UNITS OPERATED WITH AND WITHOUT THE "HYDROLYTIC ASSIST." PLANT EFFICIENCY AND THE FATE OF CYANIDE WERE ASSESSED. ALTHOUGH CYANIDE WASTES PRETREATED TO 20 MG/L CAN BE ACCOMMODATED BY AN EXTENDED AERATION PROCESS TREATING AN OTHERWISE NONTOXIC ORGANIC WASTE, THE SYSTEM IS NOT STABLE TO VARIATIONS IN CYANIDE CONCENTRATION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2

IRIS ACCESSION NUMBER: EW007514

PUBLICATION DATE: FEB 82

TITLE: ALTERNATIVE APPROACH TO ASSESSING WATER QUALITY IMPACT OF WASTEWATER EFFLUENTS.

PERSONAL AUTHOR: LEE, G. FRED; AND OTHERS

DESCRIPTOR: *AMMONIA; *CHLORINE; *CONTAMINANTS; *EFFLUENTS; *HAZARD ASSESSMENT APPROACH; RESIDUALS; *STANDARDS; *WASTEWATER; *WATER QUALITY

DESCRIPTIVE NOTE: 165-174P.

ABSTRACT: AS PART OF IMPLEMENTING PL92-500, A NUMBER OF STATES ARE ASSESSING WATER QUALITY BY MEASURING THE TOTAL CONCENTRATION OF CONTAMINANTS IN A WATER SAMPLE. WATER QUALITY SHOULD INSTEAD BE JUDGED BY THE IMPACT OF A CONTAMINANT ON THE DESIRED BENEFICIAL USES OF A PARTICULAR WATER BODY THROUGH DEFINING THE RELATIONSHIPS BETWEEN CONTAMINANT LOAD AND WATER QUALITY RESPONSE. SPECIFICALLY, THE AUTHORS DISCUSS A HAZARD ASSESSMENT APPROACH THAT HAS BEEN FOUND TO BE SUITABLE FOR ASSESSING THE IMPACT OF AMMONIA AND CHLORINE RESIDUAL IN DOMESTIC WASTEWATERS. THIS APPROACH ALSO IS APPROPRIATE FOR DETERMINING THE SIZE OF A SUITABLE MIXING ZONE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2

IRIS ACCESSION NUMBER: EW007515

PUBLICATION DATE: FEB 82

TITLE: CHEMICAL FRACTIONATION OF HEAVY METALS IN WASTEWATE-AFFECTED SOILS.

PERSONAL AUTHOR: SCHALSCHA, E. B.; AND OTHERS

DESCRIPTOR: COPPER; *HEAVY METALS; *LAND TREATMENT; *LAND APPLICATION; MANGANESE; *METALS; *RESEARCH REPORTS; *SOILS; *WASTEWATER TREATMENT; ZINC

DESCRIPTIVE NOTE: 175-180P.

ABSTRACT: DURING LAND TREATMENT OF WASTEWATER, SIGNIFICANT AMOUNTS OF HEAVY METALS MAY BE INTRODUCED INTO THE SOIL SYSTEM. CHEMICAL FORMS OF THE DEPOSITED METAL ELEMENTS WOULD AFFECT THEIR REACTIVITIES AND POLLUTION POTENTIAL IN THE ENVIRONMENT. ATTEMPTS WERE MADE TO FRACTIONATE HEAVY METALS IN THE SOIL USING THREE ESTABLISHED CHEMICAL EXTRACTION PROCEDURES. RESULTS INDICATED CONSISTENTLY HIGHER METAL RECOVERY PERCENTAGES IN THE WASTEWATER-AFFECTED SOILS. ALTHOUGH CONSIDERABLE AMOUNTS OF HEAVY METALS IN THE WASTEWATER WERE CHEMICALLY SOLUBLE, EXCHANGEABLE AND ADSORBED, MOST OF THE ACCUMULATED METALS WERE PRESENT IN THE SOIL IN ORGANIC FORM (SUCH AS CU) OR AS INORGANIC PRECIPITATES (SUCH AS ZN). THE LACK OF SOLUBLE AND EXCHANGEABLE METALS IN THE SOIL SIGNIFICANTLY REDUCES THE DOWNWARD LEACHING POTENTIAL OF DEPOSITED METALS. HOWEVER, THE LABILE NATURE OF THE ACCUMULATED METAL ELEMENTS WOULD ENRICH THE SOIL WITH PLANT-AVAILABLE HEAVY METAL ELEMENTS FOR A LONG TIME TO COME.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N2

IRIS ACCESSION NUMBER: EW007516

PUBLICATION DATE: FEB 82

TITLE: LIMITATIONS OF ELECTRONIC PARTICLE COUNTING IN REFERENCE TO ALGAL ASSAYS.

PERSONAL AUTHOR: REHNBERG, BRADLEY G.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ALGAE; *BIOASSAY; *FLORESCENCE; *LABORATORY PROCEDURES; *RESEARCH REPORTS

DESCRIPTIVE NOTE: 181-186P.

ABSTRACT: CULTURES OF SELENASTRUM CAPRICORNUTUM WERE MONITORED FOR CELL NUMBER, PHEOPHYTIN A, AND CORRECTED CHLOROPHYLL A. DRY WEIGHT DERIVED FROM CELL COUNTS INCREASED THROUGHOUT THE 15-DAY EXPERIMENT WHILE CHLOROPHYLL A AND PHEOPHYTIN A INCREASED UP TO DAY 11 AND THEN RAPIDLY DECREASED. THE EVER-INCREASING DRY WEIGHT CURVES WERE ATTRIBUTED TO THE PARTICLE COUNTER'S INABILITY TO DISTINGUISH LIVE ALGAL CELLS FROM DEBRIS, CELL FRAGMENTS, AND DEAD CELLS. IT IS SUGGESTED THAT MONITORING ALGAL GROWTH POTENTIAL (AGP) CULTURES WITH A PARAMETER SENSITIVE TO CULTURE SENESCENCE WILL AID THE PARTICLE COUNTER USER IN DECIDING WHEN TO TERMINATE AGP ASSAYS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N2

IRIS ACCESSION NUMBER: EW007517

PUBLICATION DATE: FEB 82

TITLE: RELIABILITY OF ANALYTICAL METHODS FOR ANAEROBIC MUNICIPAL SOLID WASTE SAMPLES.

PERSONAL AUTHOR: DALY, ERNEST L., JR.; FAROOQ, SHAUKAT

DESCRIPTOR: *ANAEROBIC PROCESSES; *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; *RELIABILITY; *SOLID WASTES; *STATISTICAL APPLICATION; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 187-192P.

ABSTRACT: A SPIKING STUDY WAS CONDUCTED TO DETERMINE THE RELIABILITY OF THE STANDARD ANALYTICAL METHODS FOR ANALYZING ANAEROBICALLY DIGESTED REFUSE SAMPLES OF UNIQUE CHARACTERISTICS. SAMPLES WERE SPIKED IN AMOUNTS VARYING FROM 1 TO APPROXIMATELY 2.5 TIMES THE AMOUNT OF THE CHEMICAL NORMALLY PRESENT IN AN ACTUAL SAMPLE. RELATIVE RECOVERIES RANGED FROM 44% FOR NITRATE-NITROGEN TO 174% FOR CALCIUM. NEGATIVE RECOVERIES WERE ONLY OBSERVED IN "COMPOSITE-SPIKE" SAMPLES. THE MEANS OF THE RECOVERIES IS 98%, AND NEARLY TWO-THIRDS (11 OUT OF 18 PARAMETERS) LIE WITHIN THE RANGE OF 80% TO 120%. THE RELATIVE STANDARD DEVIATIONS INDICATING THE ANALYTICAL PRECISION ARE ON THE ORDER OF 10% FOR MOST OF THE PARAMETERS ANALYZED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N2

IRIS ACCESSION NUMBER: EW007518

PUBLICATION DATE: FEB 82

TITLE: A PRELIMINARY ASSESSMENT OF MICHIGAN'S PHOSPHORUS DETERGENT BAN.

PERSONAL AUTHOR: HARTIG, JOHN H.; HORVATH, FRANK J.

DESCRIPTOR: *DETERGENTS; *EFFLUENTS; *GREAT LAKES; *MICHIGAN; *PHOSPHORUS; *REGULATIONS; *STANDARDS; *WASTEWATER; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 193-197P.

ABSTRACT: THE EFFECTS OF MICHIGAN'S PHOSPHORUS DETERGENT BAN ON MUNICIPAL WASTEWATER AND SURFACE WATERS WERE INVESTIGATED. BASED ON A SURVEY OF 58 MAJOR WASTEWATER TREATMENT PLANTS, THE BAN DECREASED INFLUENT AND EFFLUENT TOTAL PHOSPHORUS CONCENTRATIONS BY 23 AND 24%, RESPECTIVELY. IN ADDITION, THE BAN RESULTED IN A MARKED REDUCTION IN MUNICIPAL PHOSPHORUS LOADING AND SUBSTANTIAL PROGRESS TOWARD PHOSPHORUS TARGET LOADS FOR THE GREAT LAKES. IMPROVEMENTS IN SURFACE WATER QUALITY ALSO HAVE OCCURRED AS A RESULT OF OTHER SIMILAR PHOSPHORUS CONTROL PROGRAMS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N2

IRIS ACCESSION NUMBER: EW007519

PUBLICATION DATE: FEB 82

TITLE: COMPUTER-BASED IMPLEMENTATION OF COMBINED SEWER CONTROL.

PERSONAL AUTHOR: BRUECK, TERRANCE M.; AND OTHERS

DESCRIPTOR: *COMBINED SEWERS; *COMPUTER APPLICATIONS; *DESIGN; *MAINTENANCE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SEWER SYSTEMS; *STORMWATER; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 198-205P.

ABSTRACT: THE BENEFITS OF A COMPUTER-CONTROLLED COMBINED SEWER SYSTEM INCLUDE ACCURATE AND RESPONSIVE AUTOMATIC CONTROL OF STORAGE AND OVERFLOWS DURING STORM EVENTS, OPERATIONAL EASE AND FLEXIBILITY, AND A REDUCTION IN SEWER SYSTEM MAINTENANCE. THESE BENEFITS HAVE BEEN REALIZED IN LIMA, OHIO. AN EXISTING COMBINED SEWER OVERFLOW FACILITY INCLUDING EIGHT REGULATOR/OVERFLOW STATIONS, AN INTERCEPTOR LIFT STATION, AND AN EXISTING CENTRALIZED COMPUTER SYSTEM WAS ANALYZED THROUGH COMPUTER SIMULATION AND ACTUAL FIELD TESTING. THIS ANALYSIS RESULTED IN THE DESIGN AND IMPLEMENTATION OF UNIQUE CONTROL STRATEGY SOFTWARE IN WHICH THE FOLLOWING OBJECTIVES ARE MET: UPSTREAM IN-SYSTEM FLOODING IS MINIMIZED; RAINFALL IN-SYSTEM STORAGE IS MAXIMIZED; DIURNAL FLOW VARIATIONS TO THE TREATMENT PLANT ARE EQUALIZED; GATE OPERATIONS ARE MINIMIZED; AND OVERFLOW TO THE RIVER IS MEASURED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2

IRIS ACCESSION NUMBER: EW007520

PUBLICATION DATE: MAR 82

TITLE: ENVIRONMENTAL QUALITY STANDARDS DEVELOPMENT.

DESCRIPTOR: *ENVIRONMENTAL QUALITY; GOVERNMENT POLICY; *LEGISLATION; *PUBLIC HEALTH; *REGULATIONS; *SCIENTIFIC RESEARCH; *SEMINARS; *STANDARDS; *TESTING

DESCRIPTIVE NOTE: 156A-159AP.

ABSTRACT: THIS ARTICLE DISCUSSES THE PROBLEMS ASSOCIATED WITH SETTING ENVIRONMENTAL QUALITY STANDARDS AND ALSO REPORTS ON A SEMINAR ON STANDARDS ASSESSMENT AND DEVELOPMENT WHICH WAS SPONSORED BY GEORGE WASHINGTON UNIVERSITY. PARTICIPANTS AT THE SEMINAR SUGGESTED WAYS THAT PEER-REVIEW SCIENTIFIC DATA COULD BALANCE VALUE JUDGEMENTS AND LEGISLATIVE AND REGULATORY FIAT. ALSO PRESENTED ARE SUGGESTIONS FOR STANDARDS DEVELOPMENT, AND DISCUSSION OF CRITERIA, RATIONALE, AND SINGLE-SPECIES TESTING.

AVAILABILITY: ENVIRONMENTAL SCIENCE 8 TECHNOLOGY, V16 N3

IRIS ACCESSION NUMBER: EW007521

PUBLICATION DATE: MAR 82

TITLE: MICROBIAL REMOVAL OF HAZARDOUS ORGANIC COMPOUNDS.

PERSONAL AUTHOR: KOBAYASHI, HESTER; RITTMANN, BRUCE E.

DESCRIPTOR: *BIOLOGICAL TREATMENT; *HAZARDOUS SUBSTANCES; *MICROORGANISMS; *ORGANIC COMPOUNDS; *POLLUTANTS; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 170A-183AP.

ABSTRACT: THIS ARTICLE REPORTS ON IN-DEPTH EVALUATIONS OF THE POTENTIAL FOR MICROORGANISMS TO REMOVE ANTHROPOGENIC ORGANIC COMPOUNDS, MAINLY PRIORITY POLLUTANTS AND RELATED COMPOUNDS. THE EVALUATION INDICATES THAT USE OF PROPERLY SELECTED POPULATIONS OF MICROBES, AND THE MAINTENANCE OF ENVIRONMENTAL CONDITIONS MOST CONDUCIVE TO THEIR METABOLISM, CAN BE AN IMPORTANT MEANS OF IMPROVING BIOLOGICAL TREATMENT OF ORGANIC WASTES.

AVAILABILITY: ENVIRONMENTAL SCIENCE 8 TECHNOLOGY, V16 N3

IRIS ACCESSION NUMBER: EW007522

PUBLICATION DATE: MAR 82

TITLE: EXTRACTABLE ORGANIC MATTER IN MUNICIPAL WASTEWATERS. 1. PETROLEUM HYDROCARBONS: TEMPORAL VARIATIONS AND MASS EMISSION RATES TO THE OCEAN.

PERSONAL AUTHOR: EGANHOUSE, ROBERT P.; KAPLAN, ISSAC R.

DESCRIPTOR: *CALIFORNIA; *CASE STUDIES; *COASTAL AREAS; *EFFLUENTS; *HYDROCARBONS; *OCEANS; *PETROLEUM; *RESEARCH REPORTS; *WATER POLLUTION CONTROL; *WASTEWATER ANALYSIS; *WASTEWATER TREATMENT; *WATER QUALITY; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 180-186P.

ABSTRACT: SAMPLES OF FINAL EFFLUENT WERE COLLECTED FROM THE MAJOR MUNICIPAL WASTEWATER DISCHARGERS IN SOUTHERN CALIFORNIA DURING 1979 AND ANALYZED FOR TOTAL, ALIPHATIC, AND AROMATIC HYDROCARBONS. MEAN TOTAL HYDROCARBON CONTENTS OF THOSE EFFLUENTS HAVING RECEIVED MAINLY PRIMARY TREATMENT RANGED FROM 6.1 TO 16.3 MG/L, WHEREAS SLUDGE CONCENTRATIONS WERE APPROXIMATELY 340 MG/L. INPUT FROM CALIFORNIA PLANTS IS APPROXIMATELY DOUBLE THE INPUT RATE DUE TO SURFACE RUNOFF IN THIS REGION. MOREOVER, IT REPRESENTS NEARLY 6% OF THE WORLDWIDE INPUT OF WASTEWATER-BORNE PETROLEUM TO THE OCEAN. PROBLEMS ASSOCIATED WITH GLOBAL INPUT ASSESSMENTS ARE DISCUSSED, AND A CORRELATIVE MEANS OF ESTIMATING WASTEWATER HYDROCARBON CONCENTRATIONS IS PRESENTED.

AVAILABILITY: ENVIRONMENTAL SCIENCE 8 TECHNOLOGY, V16 N3

IRIS ACCESSION NUMBER: EW007528

PUBLICATION DATE: 81

TITLE: A BASIC SPILL TRAINING HANDBOOK.

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *HANDBOOKS; HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; OIL; *OIL SPILLS; *POLLUTION CONTROL; *POST SECONDARY EDUCATION; *SPILLS; TOXIC SUBSTANCES; *WASTE DISPOSAL; *WATER POLLUTION

DESCRIPTIVE NOTE: 400P. PRICE: $35.00

ABSTRACT: THIS HANDBOOK PROVIDES BACKGROUND AND TECHNICAL INFORMATION ON OIL SPILLS, AND RECOMMENDATIONS FOR EFFECTIVE CLEAN-UP AND DISPOSAL OF SPILLS. SECTIONS INCLUDE: OIL AND HAZARDOUS SPILLS -- AN OVERVIEW; HISTORY OF OIL SPILLS; RULES AND REGULATIONS; CHEMICAL AND PHYSICAL PROPERTIES OF OIL; CONTAINMENT, REMOVAL, DISPOSAL PROCEDURES; EFFECTS OF SPILLS ON THE ENVIRONMENT; COMMUNICATIONS AND LEGAL MATTERS; CONTINGENCY PLANNING AND SPCCS; HAZARDOUS SPILLS AND TOXIC WASTE SITES; AND, REFERENCE, GLOSSARY, AND BIBLIOGRAPHY.

AVAILABILITY: SEMINAR PUBLISHERS, INC., 210 FIFTH AVENUE,
NEW YORK, NY 10010

IRIS ACCESSION NUMBER: EW007529

PUBLICATION DATE: 80

TITLE: THE U.S.A.I.D. DESALINATION MANUAL.

DESCRIPTOR: *DESALINATION; *DESIGN; ENERGY; ENGINEERING;

*FACILITIES; *INSTRUCTIONAL MATERIALS; *PLANNING; *POST SECONDARY EDUCATION; *RESEARCH REVIEWS; *WATER RESOURCES; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 500P.

ABSTRACT: THIS REPORT REVIEWS THE STATE OF THE ART OF THE FOUR MAJOR DESALINATION PROCESSES AND DISCUSSES RENEWABLE ENERGY SYSTEMS FOR DESALINATION, PROCESS SELECTION, AND DESALINATION FOR DEVELOPING COUNTRIES. THE PURPOSE OF THIS BOOK IS TO SERVE AS A PLANNING TOOL WHICH WILL ASSIST READERS IN BECOMING ACQUAINTED WITH THE VARIOUS DESALINATION PROCESSES, THEIR PERFORMANCE, THE OVERALL STATE OF THE ART, AND THE ASSOCIATED POTENTIALS, PROBLEMS, DEVELOPMENT, AND ECONOMICS. CHAPTERS INCLUDE: SALINE WATER, DISTILLATION, FREEZING, REVERSE OSMOSIS, ELECTRODIALYSIS, DESALINATION BY RENEWABLE ENERGY SOURCES, PROCESS SELECTION, AND DESALINATION IN DEVELOPING COUNTRIES.

AVAILABILITY: INTERNATIONAL DESALINATION & ENVIRONMENTAL ASSOCIATION, 1000 RIVER ROAD, TEANECK, NJ 07666

IRIS ACCESSION NUMBER: EW007530

PUBLICATION DATE: MAY 81

TITLE: MORE WATER FROM LOW-YIELD WATER WELLS.

PERSONAL AUTHOR: PECK, MICHAEL K.

DESCRIPTOR: *DRINKING WATER; *GROUNDWATER; PUMPS; STORAGE; *WATER COLLECTION SYSTEMS; *WATER FLOW; *WATER RESOURCES; *WATER WELLS; *WELLS

DESCRIPTIVE NOTE: 19P.

ABSTRACT: DETAILED ARE PROCEDURES FOR OBTAINING MORE WATER FROM LOW-YIELD WATER WELLS. TOPICS DISCUSSED INCLUDE: WELL PUMP SELECTION; WATER STORAGE AND DISTRIBUTION SYSTEMS; THE CENTRAL CONTROL SYSTEMS; AND SYSTEM OPERATION.

AVAILABILITY: WEST VIRGINIA GEOLOGICAL SURVEY, PUBLICATIONS SALES, MONT CHATEAU RESEARCH CENTER, MORGANTOWN, WV 26505

IRIS ACCESSION NUMBER: EW007533

PUBLICATION DATE: 82

TITLE: ACTIVATED SLUDGE PROCESS CONTROL SERIES: NEW CONCEPTS AND PRACTICES IN ACTIVATED SLUDGE PROCESS CONTROL.

PERSONAL AUTHOR: ARTHUR, ROBERT M.

DESCRIPTOR: *ACTIVATED SLUDGE; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; INSTRUMENTATION; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PROCESS CONTROL; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 125P.

ABSTRACT: THIS TEXT PRESENTS A DIFFERENT APPROACH TO THE STUDY OF ACTIVATED SLUDGE PROCESS CONTROL, ONE IN WHICH BIOLOGICAL AS WELL AS PHYSICAL PARAMETERS ARE EXAMINED. CHAPTERS INCLUDE: CONTROLLABLE ELEMENTS IN WASTEWATER TREATMENT; INSTRUMENTATION AND PROCESS CONTROL SYSTEMS; THEORETICAL BASIS FOR SELECTION OF SENSED VARIABLES; SENSORS AND THEIR APPLICATION TO THE ANALYSIS AND CONTROL OF ACTIVATED SLUDGE; AND CONTROL SCHEMES.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007534

PUBLICATION DATE: 80

TITLE: AQUALINE THEASARUS.

PERSONAL AUTHOR: SMITH, JOYCE G.; RUSSELL, PETER J.

DESCRIPTOR: *AQUATIC ENVIRONMENTS; ENGINEERING; *ENVIRONMENT; *INDEXES; POLLUTION CONTROL; TECHNOLOGY; *THESAURI; *WASTEWATER TREATMENT; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 684P. PRICE: $45.00

ABSTRACT: THIS THESAURUS CONTAINS APPROXIMATELY 70,000 INDEX TERMS OF RELEVANCE TO WATER AND WASTEWATER TREATMENT ENGINEERS AND SCIENTISTS, AND ANYONE CONCERNED WITH WATER POLLUTION AND ENVIRONMENTAL PROTECTION. IN ADDITION, TERMS ARE INCLUDED FOR PLANTS, ANIMALS, SPECIFIC CHEMICALS, CHEMICAL CLASSES, AND INSTRUMENTAL AND ANALYTICAL TECHNIQUES RELATING TO WORK IN THE WATER INDUSTRY.

AVAILABILITY: ELLIS HORWOOD, LTD., MARKET CROSS HOUSE, COOPER STREET, CHICHESTER, WEST SUSSEX, P. O. BOX 19, 1EB, ENGLAND

IRIS ACCESSION NUMBER: EW007535

PUBLICATION DATE: 80

TITLE: METHANE GENERATION AND RECOVERY FROM LANDFILLS.

DESCRIPTOR: *GAS; *INSTRUCTIONAL MATERIALS; *LANDFILLS; *METHANE; *METHANE GENERATION; *METHANE RECOVERY; *POST SECONDARY EDUCATION; *RESOURCE RECOVERY; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 139P. PRICE: $14.95

ABSTRACT: THIS TEXT REVIEWS AVAILABLE LITERATURE PERTINENT TO LANDFILL GAS PRODUCTION AND RECOVERY AND SUMMARIZES THIS INFORMATION, EMPHASIZING CURRENTLY USED THEORIES AND APPROACHES RATHER THAN ATTEMPTING A COMPREHENSIVE REVIEW OF METHODOLOGY IN THE FIELD. CHAPTERS INCLUDE: METHANE FERMENTATION PROCESSES; COMPOSITION OF MUNICIPAL REFUSE; ESTIMATION OF THEORETICAL MAXIMUM YIELD; TIME DEPENDENCY OF GAS PRODUCTION; GAS FLOW IN LANDFILLS; FIELD TESTING OF GAS RECOVERY FROM LANDFILLS; AND, UTILIZATION AND PROCESSING OF

LANFILL GAS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007536

PUBLICATION DATE: 81

TITLE: DESIGN CALCULATIONS IN WASTEWATER TREATMENT.

PERSONAL AUTHOR: WILSON, F.

DESCRIPTOR: *DESIGN; EFFLUENTS; ENGINEERING; *INSTRUCTIONAL MATERIALS; *MATHEMATICAL APPLICATIONS; *MATHEMATICS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; SEWAGE; STORMWATER; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 236P. PRICE: $14.95

ABSTRACT: THIS TEXTBOOK PRESENTS APPLIED THEORY AND ACTUAL DESIGN CALCULATIONS FOR WASTEWATER TREATMENT PROCESSES. THE TEXT COVERS THE WATER CYCLE FROM THE PRECIPITATION AND COLLECTION OF STORMWATER, THROUGH THE VARIOUS CONVENTIONAL SEWAGE TREATMENT PROCESSES, TO THE EFFECTS OF EFFLUENT DISCHARGE ON THE RIVER SYSTEM. IN ADDITION TO THE MORE COMMON LARGE SCALE TREATMENT PROCESSES, THE TEXT ALSO COVERS THE DESIGN OF ROTATING DISC UNITS, OXIDATION PONDS, AND OXIDATION DITCHES.

AVAILABILITY: METHUEN, INC., 733 THIRD AVENUE, NEW YORK, NY 10164

IRIS ACCESSION NUMBER: EW007537

PUBLICATION DATE: FAL 80

TITLE: LAYPERSON'S GUIDE TO GROUNDWATER.

DESCRIPTOR: *CALIFORNIA; CONSERVATION; *GROUNDWATER; *GUIDES; *LEGISLATION; *MANAGEMENT; *POLICY; *WATER RESOURCES; *WATER SUPPLY; *WATER USE

DESCRIPTIVE NOTE: 16P. PRICE: $2.50

ABSTRACT: THIS GUIDE ATTEMPTS TO PRESENT THE FACTS SURROUNDING CALIFORNIA'S GROUNDWATER IN A SIMPLE AND OBJECTIVE MANNER. SECTIONS INCLUDE: CALIFORNIA'S WATER PICTURE; THE GROUNDWATER RESOURCE; OVERDRAFT AND ITS PROBLEMS; GROUNDWATER LAW; GROUNDWATER MANAGEMENT; AND, PLANS AND POLICIES.

AVAILABILITY: WESTERN WATER EDUCATION FOUNDATION, 1107 NINTH STREET, SUITE 618, SACRAMENTO, CA 95800

IRIS ACCESSION NUMBER: EW007538

PUBLICATION DATE: JAN 82

TITLE: ENERGY AND ENVIRONMENT INFORMATION RESOURCE GUIDE.

PERSONAL AUTHOR: NEUFELD, M. LYNNE; CORNOG, MARTHA

DESCRIPTOR: *AIR POLLUTION; ELECTRICITY; *ENERGY; *ENVIRONMENT; *GUIDES; *INDEXES; *INFORMATION SOURCES; NATURAL RESOURCES; *RESOURCE MATERIALS; *WATER POLLUTION

DESCRIPTIVE NOTE: 57P.

ABSTRACT: THIS GUIDE GREW OUT OF A SEMINAR DESIGNED TO ORIENT LIBRARIANS, INFORMATION SPECIALISTS, EDUCATORS, ADMINISTRATORS, AND TECHNICAL EXPERTS TO THE INTERDISCIPLINARY NATURE OF ENERGY AND ENVIRONMENT INFORMATION. INCLUDED ARE BASIC SECONDARY AND TERTIARY INFORMATION SERVICES FOR THE FOLLOWING TOPICS: ENVIRONMENT -- GENERAL; AIR POLLUTION AND AIR QUALITY; WATER POLLUTION AND WATER QUALITY; EARTH AND LAND TOPICS; ENERGY -- GENERAL; FOSSIL FUELS; RENEWABLE ENERGY SOURCES; NUCLEAR ENERGY; AND, ELECTRICITY.

AVAILABILITY: NATIONAL FEDERATION OF ABSTRACTING AND INDEXING SERVICE, 112 SOUTH 16TH STREET, PHILADELPHIA, PA 19102

IRIS ACCESSION NUMBER: EW007539

PUBLICATION DATE: 81

TITLE: USING MICROCOMPUTERS IN BUSINESS - A GUIDE FOR THE PERPLEXED.

PERSONAL AUTHOR: VEIT, STANLEY S.

DESCRIPTOR: *BUSINESS; *COMPUTER APPLICATIONS; COMPUTERS; *EQUIPMENT; *GUIDES; *INFORMATION MANAGEMENT; *MICROCOMPUTERS; *RECOMMENDATIONS; *WORD PROCESSING

DESCRIPTIVE NOTE: 142P. PRICE: $9.95

ABSTRACT: THIS BOOK IS INTENDED AS A GUIDE TO THE BUSINESS PERSON WHO IS CONSIDERING A SMALL COMPUTER SYSTEM. IT DESCRIBES THE ADVANTAGES AND DANGERS OF COMPUTERIZATION AND GIVES THE POTENTIAL USER THE KIND OF INFORMATION NEEDED TO MAKE INTELLIGENT DECISIONS. CHAPTERS INCLUDE: MAINFRAMES, MINICOMPUTERS, AND MICROCOMPUTERS; HOW A COMPUTER CAN HELP YOUR BUSINESS; WORD PROCESSING; DATA BASE MANAGEMENT; HOW TO INSTALL A COMPUTER WITHOUT DISRUPTING YOUR BUSINESS; BUYING YOUR SYSTEM; COMPUTER LANGUAGES; THE LIMITATIONS OF THE MICROCOMPUTER; SOFTWARE: WHERE TO FIND IT, HOW TO JUDGE IT; WHAT TO DO WHEN THE SYSTEM GOES DOWN; HOW DOES A MICROCOMPUTER WORK; AND MICROCOMPUTER MEMORY.

AVAILABILITY: HAYDEN PUBLISHING COMPANY, INC., P. O. BOX 302, ROCHELLE PARK, NJ 07662

IRIS ACCESSION NUMBER: EW007540

PUBLICATION DATE: JAN 82

TITLE: WATER REUSE - JANUARY 1982.

PERSONAL AUTHOR: MIDDLEBROOKS, E. JOE

DESCRIPTOR: *CASE HISTORIES; *CONSERVATION; *DESIGN; FACILITIES; HEALTH EFFECTS; INDUSTRY; *INSTRUCTIONAL MATERIALS; *LEGAL FACTORS; *MUNICIPALITIES; *NATURAL RESOURCES; *POST SECONDARY EDUCATION; *RECYCLING; *STATE-OF-THE-ART REVIEWS; TECHNOLOGICAL ADVANCEMENTS; *WATER RESOURCES; *WASTEWATER TREATMENT; *WATER REUSE; WETLANDS

DESCRIPTIVE NOTE: 830P. PRICE: $40.00

ABSTRACT: THIS TEXT PRESENTS A COMPREHENSIVE EXAMINATION OF WASTEWATER REUSE DESIGN DATA, CASE HISTORIES, PERFORMANCE DATA, MONITORING INFORMATION, HEALTH INFORMATION, SOCIAL IMPLICATIONS, LEGAL AND ORGANIZATIONAL STRUCTURES, AND BACKGROUND INFORMATION NEEDED TO ANALYZE THE DESIRABILITY OF WATER REUSE ARE PRESENTED. THE BOOK IS INTENDED FOR CONSULTING ENGINEERS, ENVIRONMENTAL SCIENTISTS, SOCIAL SCIENTISTS, REGULATORY PERSONNEL, AND ACADEMIC INSTITUTIONS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007541

PUBLICATION DATE: 82

TITLE: LAND TREATMENT OF MUNICIPAL WASTEWATER - VEGETATION SELECTION AND MANAGEMENT.

PERSONAL AUTHOR: D'ITRI, FRANK M.

DESCRIPTOR: *AGRICULTURE; *GUIDELINES; *IRRIGATION; *INSTRUCTIONAL MATERIALS; *LAND APPLICATION; *LAND TREATMENT; *MANAGEMENT; *MUNICIPAL WASTEWATER; *POST SECONDARY EDUCATION; *RESEARCH; *WASTEWATER TREATMENT; *VEGETATION SELECTION; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 218P. PRICE: $24.50

ABSTRACT: PRESENTED IS AN EFFORT TO COMPILE DATA FROM STATE AND FEDERAL RESEARCH PROJECTS IN THE NORTH CENTRAL REGION OF THE UNITED STATES INTO A SET OF GUIDELINES FOR THE REGIONAL SELECTION AND MANAGEMENT OF VEGETATION FOR LAND TREATMENT OF MUNICIPAL WASTEWATER BY SLOW RATE OR OVERLAND FLOW SYSTEMS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007542

PUBLICATION DATE: 82

TITLE: HAZARDOUS WASTES PROCESSING TECHNOLOGY.

PERSONAL AUTHOR: KIANG, YEN-HSIUNG; METRY, AMIR A.

DESCRIPTOR: *HAZARDOUS WASTES; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *POST SECONDARY EDUCATION; SOLID WASTES; *STATE OF THE ART REVIEWS; *TECHNOLOGY; THERMAL PROCESSING; *TOXIC SUBSTANCES; *WASTE DISPOSAL; *WASTE TREATMENT

DESCRIPTIVE NOTE: 549P. PRICE: $44.95

ABSTRACT: IT IS THE OBJECTIVE OF THIS BOOK TO CONSOLIDATE PRESENT STATE-OF-THE-ART HAZARDOUS WASTE PROCESSING TECHNOLOGIES INTO ONE COMPREHENSIVE VOLUME. PART ONE DISCUSSES THERMAL PROCESSING TECHNOLOGIES AND EXAMINES REQUIREMENTS, FUNDAMENTALS, EQUIPMENT, SPECIAL TOPICS, PERIPHERAL SYSTEMS, AND MISCELLANEOUS AND DEVELOPING TECHNOLOGIES. PART TWO DISCUSSES TREATMENT TECHNOLOGIES AND EXAMINES PROCESS AND SITE SELECTION REQUIREMENTS, PHYSICAL TREATMENT, CHEMICAL TREATMENT, AND BIOLOGICAL TREATMENT.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007543

PUBLICATION DATE: 82

TITLE: PLATING WASTE TREATMENT.

PERSONAL AUTHOR: CHERRY, KENNETH F.

DESCRIPTOR: *COSTS; *ECONOMIC FACTORS; *HEAVY METALS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *PLATING WASTES; *POST SECONDARY EDUCATION; REGULATIONS; *RESOURCE RECOVERY; *STATE-OF-THE-ART REVIEWS; *TECHNOLOGY; *WASTEWATER TREATMENT; *WASTE TREATMENT

DESCRIPTIVE NOTE: 324P. PRICE: $29.95

ABSTRACT: THIS TEXT PRESENTS A REVIEW OF THE STATE-OF-THE-ART TREATMENT AND RECOVERY TECHNIQUES FOR PLATING WASTES. SECTIONS INCLUDE: BASIC BACKGROUND; TREATMENT OF COMMON METAL WASTES; SOLIDS REMOVAL; OILS AND PHENOLS; RINSING; RECOVERY METHODS; SPECIAL CONSIDERATIONS; SPECIFICATIONS; COST METHODS; AND, U. S. ENVIRONMENTAL PROTECTION AGENCY REGULATIONS. ADVANTAGES AND PROBLEMS, FROM BOTH THE OPERATIONAL AND ECONOMIC PERSPECTIVE, ARE PRESENTED TO ASSIST IN MAKING A REASONABLE SELECTION OF A WASTE TREATMENT OR RESOURCE RECOVERY SYSTEM.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007544

PUBLICATION DATE: 82

TITLE: EDUCATION AND TEACHING IN ANALYTICAL CHEMISTRY.

PERSONAL AUTHOR: BAIULESCU, G. E.; AND OTHERS

DESCRIPTOR: *ANALYTICAL CHEMISTRY; *CHEMISTRY; *COLLEGE SCIENCE; *EDUCATIONAL METHODS; *HIGHER EDUCATION; *INSTRUCTION; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *SCIENCE EDUCATION; *TEACHER EDUCATION; TECHNICAL EDUCATION

DESCRIPTIVE NOTE: 190P.

ABSTRACT: THE AIM OF THIS BOOK IS TO EXPOSE THE BASIC IDEA THAT ANALYTICAL CHEMISTRY IS AN INDEPENDENT SCIENCE, AS WELL AS TO EMPHASIZE THE ROLE OF TEACHING AND OF EDUCATION IN ANALYTICAL CHEMISTRY AND CHEMICAL ANALYSIS. SPECIFIC ATTENTION IS FOCUSED ON TEACHING METHODS AND PREPARATION. IT IS DESIGNED FOR TEACHERS AND LECTURERS IN ANALYTICAL CHEMISTRY AND ALL ITS RELATED DISCIPLINES, IN UNIVERSITIES, TECHNICAL COLLEGES, AND OTHER EDUCATIONAL INSTITUTIONS.

AVAILABILITY: JOHN WILEY 8 SONS, INC., PUBLISHERS, 605 THIRD STREET, NEW YORK, NY 10158

IRIS ACCESSION NUMBER: EW007545

PUBLICATION DATE: 79

TITLE: HOW TO FIND CHEMICAL INFORMATION - A GUIDE FOR PRACTICING CHEMISTS, TEACHERS, AND STUDENTS.

PERSONAL AUTHOR: MAIZELL, ROBERT E.

DESCRIPTOR: *CHEMICAL ENGINEERING; *CHEMISTRY; *GUIDES; *INDEXES; INFORMATION CENTERS; *INFORMATION RETRIEVAL; *INFORMATION SOURCES; RESEARCH

DESCRIPTIVE NOTE: 261P.

ABSTRACT: THIS BOOK PRESENTS: (1) THE MOST IMPORTANT AND ENDURING OF THE CLASSICAL TOOLS OF CHEMICAL INFORMATION; (2) THE MORE SIGNIFICANT NEWER TOOLS; AND, (3) THE UNDERLYING METHODS, PRINCIPLES, AND KEYS THE CHEMIST AND ENGINEER NEED TO COPE WITH THE CONSTANTLY CHANGING ARRAY OF CHEMICAL INFORMATION SOURCES AND TOOLS. CHAPTERS INCLUDE: BASIC CONCEPTS; INFORMATION FLOW AND COMMUNICATION PATTERNS IN CHEMISTRY; SEARCH STRATEGY; KEEPING UP-TO-DATE -- CURRENT AWARENESS PROGRAMS; HOW TO GET ACCESS TO ARTICLES, BOOKS, PATENTS, AND OTHER DOCUMENTS QUICKLY AND EFFICIENTLY; THE CHEMICAL ABSTRACTS SERVICE; OTHER ABSTRACTING AND INDEXING SERVICES; COMPUTER-BASED ON-LINE AND OFF-LINE INFORMATION RETRIEVAL SYSTEMS AND SERVICES; REVIEWS; ENCYCLOPEDIAS AND OTHER MAJOR REFERENCE BOOKS; PATENTS; SAFETY AND RELATED TOPICS; LOCATING AND USING PHYSICAL PROPERTY AND RELATED DATA; CHEMICAL MARKETING AND BUSINESS INFORMATION SOURCES; AND PROCESS INFORMATION.

AVAILABILITY: JOHN WILEY 8 SONS, INC., 605 THIRD AVENUE, NEW YORK, NY 10158

IRIS ACCESSION NUMBER: EW007546

PUBLICATION DATE: MAR 82

TITLE: SEWER NETWORK ROUTING BY DYNAMIC WAVE CHARACTERISTICS.

PERSONAL AUTHOR: SEVUK, A. SUBA; YEN, BEN CHIE

DESCRIPTOR: *DYNAMIC WAVE MODELS; *FLOW RATES; *HYDRAULICS; *MODELING; *RESEARCH REPORTS; *SEWER SYSTEMS; *SEWERS; STORMWATER; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 379-398P.

ABSTRACT: HYDRAULICS OF UNSTEADY FLOW IN STORM SEWER NETWORKS IS INVESTIGATED BY USING A DYNAMIC WAVE SIMULATION MODEL. THE ILLINOIS STORM SEWER (ISS) MODEL SOLVES THE COMPLETE DYNAMIC EQUATIONS USING THE METHOD OF CHARACTERISTICS. TWO EXAMPLES ARE PRESENTED. ONE IS A 48-PIPE SEWER SYSTEM TO SHOW THAT FOR UNSTEADY OPEN CHANNEL FLOW IN SEWER NETWORKS, THE BACKWATER EFFECT OF THE JUNCTIONS CANNOT BE IGNORED, UNDER CERTAIN CIRCUMSTANCES REVERSAL FLOW MAY OCCUR, THE DEPTH-DISCHARGE RELATIONSHIP IS NOT UNIQUE AND A LOOP-TYPE RATING CURVE EXISTS, AND THE OCCURRENCE OF MAXIMUM DISCHARGE IN A SEWER NEED NOT COINCIDE WITH THAT OF MAXIMUM DEPTH. THE SECOND EXAMPLE SHOWS HOW A DYNAMIC WAVE ROUTING MODEL CAN BE USED TO EVALUATE AND IMPROVE A SEWER SYSTEM.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION, V108 N3

IRIS ACCESSION NUMBER: EW007561

PUBLICATION DATE: MAR 82

TITLE: 'COMPUTERIZED' MEANS COST-EFFECTIVE FOR SEWAGE TREATMENT.

PERSONAL AUTHOR: DAVIS, ROBERT A.; DAUGHERTY, JAMES L.

DESCRIPTOR: *CASE STUDIES; COMPUTER APPLICATIONS; *COMPUTERS; COSTS; *COST EFFECTIVENESS; *EQUIPMENT; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 39-44P.

ABSTRACT: THIS ARTICLE DISCUSSES HOW THE THORN CREEK BASIN SANITARY DISTRICT (ILLINOIS) HAS USED COMPUTERS TO AID IN COST-EFFECTIVE OPERATION OF THEIR FACILITIES. INCLUDED IS A DETAILED DESCRIPTION OF THE OPERATING CAPABILITIES OF THEIR COMPUTER SYSTEM, THE HARDWARE AND SOFTWARE, AND A BREAKDOWN OF THE COSTS AND COST-SAVINGS OF THE COMPUTER SYSTEM.

AVAILABILITY: AMERICAN CITY 8 COUNTY, V97 N3

IRIS ACCESSION NUMBER: EW007562

PUBLICATION DATE: MAR 82

TITLE: CLEANING UP CLEAN WATER'S ACT.

DESCRIPTOR: *CONSTRUCTION; *CONSTRUCTION GRANTS PROGRAM; *EPA; *FACILITIES; *GRANTS; *GUIDELINES; *PROGRAM EVALAUTION; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 59, 65P.

ABSTRACT: THIS ARTICLE IS A SUMMARY OF THE CONCLUSIONS DRAWN BY THE REPORT OF THE SUBCOMMITTEE ON PUBLIC WORKS AND TRANSPORTATION OF THE U.S. HOUSE OF REPRESENTATIVES AFTER IT INVESTIGATED THE CONSTRUCTION GRANTS PROGRAM. TWENTY-TWO SPECIFIC RECOMMENDATIONS ARE GIVEN REGARDING THE REDIRECTION OF THE CONSTRUCTION GRANTS PROGRAM AND THE CLEAN WATER ACT.

AVAILABILITY: AMERICAN CITY & COUNTY, V97 N3

IRIS ACCESSION NUMBER: EW007571

TITLE: ECONOMIC ANALYSIS OF WATER MAIN BREAKS.

PERSONAL AUTHOR: WALSKI, THOMAS M.; PELLICCIA, ANTHONY

DESCRIPTOR: *CASE STUDIES; *COSTS; *ECONOMIC FACTORS; *MAINTENANCE; *MATHEMATICAL APPLICATIONS; MODELS; *PIPES; *WATER DISTRIBUTION; *WATER MAINS

ABSTRACT: A SET OF EQUATIONS, BASED ON A STUDY OF THE 100-YEAR-OLD BINGHAMTON, NY WATER DISTRIBUTION SYSTEM, WAS DEVELOPED AS A MODEL FOR USE IN MAKING DECISIONS ON WHETHER A PIPE SHOULD BE REPLACED OR REPAIRED AND TO PROJECT THE ESTIMATED COST OF SUCH REPLACEMENTS AND REPAIRS. THE EQUATIONS CAN BE USED TO PREDICT THE RATE OF BREAKS IN PIPES DEPENDING ON PIPE DIAMETER, AGE, MATERIALS, TEMPERATURE, STRESSES, AND THE HISTORY OF PREVIOUS BREAKS. ECONOMIC ANALYSES PROVIDE THE INFORMATION FOR PREDICTING WHEN TYPICAL PIPES SHOULD BE REPLACED AND FOR IDENTIFYING SPECIFIC PIPES THAT NEED IMMEDIATE REPLACEMENT.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N3

IRIS ACCESSION NUMBER: EW007572

PUBLICATION DATE: MAR 82

TITLE: USING PUMP CURVES AND VALVING TECHNIQUES FOR EFFICIENT PUMPING.

PERSONAL AUTHOR: HILSDON, CHARLES W.

DESCRIPTOR: *EQUIPMENT; *GUIDELINES; *MATHEMATICAL APPLICATIONS; MODELS; *OPERATIONS (WATER); *PUMPS; *PUMP SELECTION; VALVES; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 157-159P.

ABSTRACT: THIS ARTICLE GIVES PRACTICAL INFORMATION ON THE BASIC PRINCIPLES INVOLVED IN SELECTING APPROPRIATE PUMPING SYSTEMS WITHOUT RESORTING, AS THE AUTHOR SAYS, TO "PULLING A PUMP OFF THE SHELF." SINCE EACH INSTALLATION IS DIFFERENT, PUMPS SHOULD BE CONSIDERED IN VARIOUS COMBINATIONS. GUIDELINES AND SUGGESTIONS ARE GIVEN FOR DEVELOPING SYSTEM HEAD CURVES, OPERATING PUMPS IN PARALLEL AND IN SERIES, AND REGULATING CAPACITY WITH VALVING TECHNIQUES. THE AUTHOR INCLUDES SUGGESTIONS FOR AVOIDING PROBLEMS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N3

IRIS ACCESSION NUMBER: EW007573

PUBLICATION DATE: MAR 82

TITLE: SAFER, MORE PRODUCTIVE MEANS OF KJELDAHL NITROGEN ANALYSIS.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CASE STUDIES; *EQUIPMENT; INSTRUMENTATION; *KJELDAHL; *LABORATORY SAFETY; LABORATORY TECHNIQUES; *NITROGEN; *PERFORMANCE EVALUATION; SAFETY; *TESTING; *WATER QUALITY

DESCRIPTIVE NOTE: 34-36 NEWSP.

ABSTRACT: THIS ARTICLE DESCRIBES THE USE OF A NEW KJELDAHL NITROGEN ANALYSIS SYSTEM AT THE WATER QUALITY SECTION OF THE ILLINOIS STATE WATER SURVEY. THE NEW SYSTEM IS REPORTEDLY SAFER, FASTER, AND SMALLER THAN CLASSICAL MODELS. AMONG THE MANY NEW FEATURES OF THE SYSTEM ARE: THICK-WALLED GLASS DGESTION-DISTILLATION TUBES; INDIVIDUAL ELECTRIC HEATING ELEMENTS INSTEAD OF GAS BURNERS; REDESIGN OF THE DIGESTER; AND A BUILT-IN ASPIRATIONS SYSTEM OF THE DISTILLER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N3

IRIS ACCESSION NUMBER: EW007574

PUBLICATION DATE: JUN 81

TITLE: NPDES COMPLIANCE MONITORING INSPECTOR TRAINING: SAMPLING PROCEDURES.

DESCRIPTOR: *COMPLIANCE; *INSPECTION; *INSPECTORS; *INSTRUCTIONAL MATERIALS; *MONITORING; *NPDES; *POLLUTION CONTROL; *POST SECONDARY EDUCATION; *SAMPLING; *TRAINING PROGRAMS; *WATER QUALITY

DESCRIPTIVE NOTE: 65P. PB82-136375

ABSTRACT: THIS DOCUMENT IS PART OF A SET OF FIVE DOCUMENTS WHICH MAKE UP THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) COMPLIANCE MONITORING TRAINING PROGRAM. THE TRAINING MODULES WERE DEVELOPED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA), OFFICE OF WATER ENFORCEMENT AND PERMITS (OWEP), TO INSTRUCT NPDES INSPECTORS IN VARIOUS ASPECTS OF CONDUCTING NPDES COMPLIANCE MONITORING

INSPECTIONS. THE TRAINING MODULE IS ON SAMPLING PROCEDURES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007575

PUBLICATION DATE: JUN 81

TITLE: NPDES COMPLIANCE MONITORING INSPECTOR TRAINING: BIOMONITORING.

DESCRIPTOR: *BIOMONITORING; *COMPLIANCE; *INSPECTION; *INSPECTORS; *INSTRUCTIONAL MATERIALS; *MONITORING; *NPDES; POLLUTION CONTROL; *POST SECONDARY EDUCATION; *TRAINING PROGRAMS; *WATER QUALITY

DESCRIPTIVE NOTE: 97P. PB82-136367

ABSTRACT: THIS DOCUMENT IS PART OF A SET OF FIVE DOCUMENTS WHICH MAKE UP THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) COMPLIANCE MONITORING TRAINING PROGRAM. THE TRAINING MODULES WERE DEVELOPED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA), OFFICE OF WATER ENFORCEMENT AND PERMITS (OWEP), TO INSTRUCT NPDES INSPECTORS IN VARIOUS ASPECTS OF CONDUCTING NPDES COMPLIANCE MONITORING INSPECTIONS. THE TRAINING MODULE DESCRIBES BIOMONITORING PROCEDURES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007576

PUBLICATION DATE: JUN 81

TITLE: NPDES COMPLIANCE MONITORING INSPECTOR TRAINING: LEGAL ISSUES.

DESCRIPTOR: *COMPLIANCE; *ENFORCEMENT; *INSPECTION; *INSPECTORS; *INSTRUCTIONAL MATERIALS; *LEGAL ASPECTS; *MONITORING; *NPDES; POLLUTION CONTROL; *POST SECONDARY EDUCATION; *TRAINING PROGRAMS; *WATER QUALITY

DESCRIPTIVE NOTE: 97P. PB82-136359

ABSTRACT: THIS DOCUMENT IS PART OF A SET OF FIVE DOCUMENTS WHICH MAKE UP THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) COMPLIANCE MONITORING TRAINING PROGRAM. THE TRAINING MODULES WERE DEVELOPED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA), OFFICE OF WATER ENFORCEMENT AND PERMITS (OWEP), TO INSTRUCT NPDES INSPECTORS IN VARIOUS ASPECTS OF CONDUCTING NPDES COMPLIANCE MONITORING INSPECTIONS. THE TRAINING MODULE DESCRIBES THE LEGAL ISSUES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007577

PUBLICATION DATE: JUN 81

TITLE: NPDES COMPLIANCE MONITORING INSPECTOR TRAINING: LABORATORY ANALYSIS.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *COMPLIANCE; INSPECTION; *INSPECTORS; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MONITORING; *NPDES; POLLUTION CONTROL; *POST SECONDARY EDUCATION; *TRAINING PROGRAMS; *WATER QUALITY

DESCRIPTIVE NOTE: 166P. PB82-136383

ABSTRACT: THIS DOCUMENT IS PART OF A SET OF FIVE DOCUMENTS WHICH MAKE UP THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) COMPLIANCE MONITORING TRAINING PROGRAM. THE TRAINING MODULES WERE DEVELOPED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA), OFFICE OF WATER ENFORCEMENT AND PERMITS (OWEP), TO INSTRUCT NPDES INSPECTORS IN VARIOUS ASPECTS OF CONDUCTING NPDES COMPLIANCE MONITORING INSPECTIONS. THE TRAINING MODULE DESCRIBES PROCEDURES FOR LABORATORY ANALYSIS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007578

PUBLICATION DATE: JUN 81

TITLE: NPDES COMPLIANCE MONITORING INSPECTOR TRAINING: OVERVIEW.

DESCRIPTOR: *COMPLIANCE; *INSPECTION; *INSPECTORS; *INSTRUCTIONAL MATERIALS; *MONITORING; *NPDES; POLLUTION CONTROL; *POST SECONDARY EDUCATION; *TRAINING PROGRAMS; *WATER QUALITY

DESCRIPTIVE NOTE: 66P. PB82-136342

ABSTRACT: THIS DOCUMENT IS PART OF A SET OF FIVE DOCUMENTS WHICH MAKE UP THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) COMPLIANCE MONITORING TRAINING PROGRAM. THE TRAINING MODULES WERE DEVELOPED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA), OFFICE OF WATER ENFORCEMENT AND PERMITS (OWEP), TO INSTRUCT NPDES INSPECTORS IN VARIOUS ASPECTS OF CONDUCTING NPDES COMPLIANCE MONITORING INSPECTIONS. THE REPORT IS AN OVERVIEW WHICH EXAMINES COMPLIANCE INSPECTIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007579

PUBLICATION DATE: SEP 81

TITLE: NPDES COMPLIANCE FLOW MEASUREMENT MANUAL.

PERSONAL AUTHOR: GUTHRIE, DAVID L.

DESCRIPTOR: *COMPLIANCE; *FLOW HYDRAULICS; *FLOW MEASUREMENT; *GUIDES; *HYDRAULICS; *MANUALS; *MEASUREMENT; *NPDES; *WATER RESOURCES

DESCRIPTIVE NOTE: 149P. PB82-131178

ABSTRACT: THIS FLOW MEASUREMENT MANUAL IS DESIGNED TO FURNISH INFORMATION ON FLOW HYDRAULICS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007580

PUBLICATION DATE: MAR 81

TITLE: SOUTHEASTERN SOIL EROSION CONTROL AND WATER QUALITY WORKSHOP, NOVEMBER 19-21, 1980, NASHVILLE, TENNESSEE.

DESCRIPTOR: *AGRICULTURAL PRACTICES; AGRICULTURE; *CONFERENCE PROCEEDINGS; ECONOMIC FACTORS; *EROSION CONTROL; *LEGISLATION; NO-TILL FARMING; *SOIL EROSION; *WATER QUALITY

DESCRIPTIVE NOTE: 116P. PB82-139502

ABSTRACT: THIS REPORT INCLUDES PAPERS PRESENTED AT A WORKSHOP ON SOIL EROSION CONTROL AND WATER QUALITY WHICH WAS HELD IN NASHVILLE, TENNESSEE, ON NOVEMBER 19-21, 1980. TOPICS INCLUDE: SOIL EROSION AND WATER QUALITY FROM THE FARMERS VIEWPOINT, LEGISLATION, NO TILLAGE FARMING, AND ECONOMICS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007581

PUBLICATION DATE: DEC 81

TITLE: SEWAGE SLUDGE DISPOSAL. FEBRUARY, 1976-NOVEMBER, 1981. (CITATIONS FROM THE ENGINEERING INDEX DATA BASE.)

DESCRIPTOR: *ABSTRACTS; AGRICULTURE; *BIBLIOGRAPHIES; BIOLOGICAL DEGRADATION; CHEMICAL ANALYSIS; DEWATERING; *INCINERATION; *LAND APPLICATION; *SLUDGE; *SEWAGE SLUDGE; *SLUDGE DISPOSAL; *SLUDGE TREATMENT; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 338P. PB82-802943

ABSTRACT: CITATIONS OF WORLDWIDE STUDIES ON SLUDGE RECYCLING, LAND APPLICATION, INCINERATION, BIOLOGICAL DEGRADATION, AND OCEAN DUMPING ARE PRESENTED. SLUDGE DEWATERING, DRYING, FREEZING, DETOXIFICATION, PIPING, AND FERMENTATION ARE AMONG TOPICS INCLUDED. CHEMICAL ANALYSIS, WATER POLLUTION IMPACTS, SOIL FERTILIZATION, AND CROP MONITORING ARE ALSO COVERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 331 CITATIONS, 33 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007582

PUBLICATION DATE: DEC 81

TITLE: SEWAGE SLUDGE DISPOSAL. 1975-NOVEMBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; *COSTS; DEWATERING; DIGESTION; DISINFECTION; *ECOLOGY; *INCINERATION; *LAND APPLICATION; PLANNING; RECYCLING; REGULATIONS; *SLUDGE; *SEWAGE SLUDGE; *SLUDGE DISPOSAL; *SLUDGE TREATMENT; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 356P. PB82-802935

ABSTRACT: CITATIONS OF FEDERALLY-FUNDED RESEARCH ON SLUDGE DISINFECTION, IRRADIATION, DIGESTION, DEWATERING, DECONTAMINATION FOR LAND DISPOSAL, RECYCLING, INCINERATION, AND OCEAN DISPOSAL ARE PRESENTED. THE EFFECT OF SEWAGE SLUDGE DISPOSAL ON WATER POLLUTION, ECOSYSTEMS, AND THE ENVIRONMENT IS ALSO COVERED. STUDIES ON REGULATIONS, LEGISLATION, COSTS, AND PLANNING ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 348 CITATIONS, 54 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007583

PUBLICATION DATE: DEC 80

TITLE: TREATABILITY STUDIES OF PESTICIDE MANUFACTURING WASTEWATERS: ETHYLENEBISDITHIOCARBAMATE FUNGICIDES.

PERSONAL AUTHOR: ZWEIDINGER, RUTH A.; AND OTHERS

DESCRIPTOR: BIOASSAYS; *BIOLOGICAL TREATMENT; *EFFLUENTS; *ETHYLENEBISDITHIOCARBAMATE; *FUNGICIDES; *INDUSTRIAL WASTES; *PESTICIDES; *PILOT STUDIES; *POLLUTION CONTROL; *RESEARCH REPORTS; TOXICITY; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 83P. PB82-107566

ABSTRACT: THIS REPORT GIVES RESULTS OF LABORATORY AND PILOT STUDIES ON THE BIOLOGICAL TREATABILITY OF WASTEWATERS FROM THE MANUFACTURE OF ETHYLENEBISDITHIOCARBAMATE (EBDC) FUNGICIDE. AT CONCENTRATION LEVELS REPRESENTATIVE OF EBDC PRODUCTION UNITS AND TOTAL PLANT WASTEWATERS DISCHARGED TO PUBLICLY OWNED TREATMENT WORKS (POTWS) (1 MG/L), RESULTS INDICATE LITTLE REDUCTION IN EBDC LEVELS OR IN ETHYLENE THIOUREA (ETU), AN IMPORTANT DECOMPOSITION PRODUCT OF EBDC AS A RESULT OF BIOLOGICAL TREATMENT. RESULTS OF ALGAL

(SELENASTRUM CAPRICORNUTUM) AND FISH (DAPHNIA MAGNA) BIOASSAYS ON THE TREATED WASTEWATER INDICATED INHIBITION OF ALGAL GROWTH AND FISH MOBILITY, ALTHOUGH LITTLE TOXICITY WAS INDICATED. CHEMICAL OXYGEN DEMAND (COD) REMOVAL BY THE BIOLOGICAL (ACTIVATED SLUDGE) TREATMENT UNIT WAS UNAFFECTED BY THE FUNGICIDE WASTEWATER, ALTHOUGH NITRIFICATION WAS REDUCED OR ABSENT IN THESE UNITS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007584

PUBLICATION DATE: NOV 81

TITLE: WASTEWATER TREATMENT USING FLOCCULATION, COAGULATION, AND FLOTATION. 1976-OCTOBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; *COAGULATION; *FLOCCULATION; *FLOTATION; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 246P. PB82-802034

ABSTRACT: FLOCCULATION, COAGULATION, AND FLOTATION STUDIES FOR SEWAGE AND INDUSTRIAL WASTE TREATMENT PROCESSES ARE CITED IN THIS BIBLIOGRAPHY OF FEDERALLY-FUNDED RESEARCH. THE PROCESSES, FLOCCULANTS, COAGULANTS, PERFORMANCE, AND EFFECTIVENESS ARE COVERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 257 CITATIONS, 25 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007585

PUBLICATION DATE: NOV 81

TITLE: WASTEWATER EFFLUENT GUIDELINES AND PERFORMANCE STANDARDS USING BEST TECHNOLOGY. 1964-NOVEMBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *BEST TECHNOLOGY; *BIBLIOGRAPHIES; ECONOMIC FACTORS; *EFFLUENTS; ENVIRONMENTAL IMPACTS; *GUIDELINES; INDUSTRY; *OPERATIONS (WASTEWATER); PRETREATMENT; REGULATIONS; *STANDARDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 204P. PB82-801994

ABSTRACT: THE CITATIONS DESCRIBE WASTEWATER EFFLUENT LIMITATION GUIDELINES AND THEIR DEVELOPMENT, STANDARDS OF PERFORMANCE, AND PRETREATMENT STANDARDS FOR INDUSTRIES, SO THAT THEY MAY IMPLEMENT SECTIONS OF THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972. EFFLUENT LIMITATIONS GUIDELINES ARE SET FORTH FOR THE DEGREE OF EFFLUENT REDUCTION ATTAINABLE THROUGH THE APPLICATION OF THE 'BEST TECHNOLOGY ECONOMICALLY ACHIEVEABLE', WHICH MUST BE ACHIEVED BY EXISTING POINT SOURCES BY JULY 1, 1977 AND JULY 1, 1983 RESPECTIVELY. STUDIES ARE INCLUDED ON THE ECONOMIC AND ENVIRONMENTAL IMPACTS OF THESE GUIDELINES ON INDUSTRIES AND THEIR SURROUNDINGS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 197 CITATIONS, 26 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007586

PUBLICATION DATE: NOV 81

TITLE: WASTE TREATMENT BY REVERSE OSMOSIS AND MEMBRANE PROCESSING. 1978-NOVEMBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; ELECTRODIALYSIS; *INDUSTRIAL WASTES; *MEMBRANE PROCESSING; *OSMOSIS; *RESEARCH REPORTS; *REVERSE OSMOSIS; *SEWAGE; ULTRAFILTRATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 133P. PB82-801986

ABSTRACT: CITATIONS OF FEDERALLY-FUNDED RESEARCH COVER THE TREATMENT OF SEWAGE AND INDUSTRIAL WASTES BY REVERSE OSMOSIS, ULTRAFILTRATION, ELECTRODIALYSIS AND OTHER OSMOTIC PROCESSES. DESALTING OF GROUND, SURFACE, AND SEA WATERS IS EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 126 CITATIONS, 33 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007587

PUBLICATION DATE: DEC 81

TITLE: METAL CONTAINING LIQUID WASTES. JUNE, 1970-DECEMBER, 1981. (CITATIONS FROM THE ENGINEERING INDEX DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; *ELECTROPLATING; *INDUSTRIAL WASTES; *METALS; POLLUTION CONTROL; *RESOURCE RECOVERY; *RECYCLING; *TECHNOLOGY; *WASTE DISPOSAL; *WASTE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 222P. PB82-857657

ABSTRACT: CITATIONS IN THIS BIBLIOGRAPHY COVER TECHNIQUES AND TECHNOLOGY FOR THE CONTROL, TREATMENT, AND DISPOSAL OF METAL CONTAINING LIQUID WASTES AS WELL AS FOR THE RECOVERY OR RECLAMATION OF METALS FROM THESE WASTES (ESPECIALLY ELECTROPLATING WASTES). SOME CONSIDERATION IS GIVEN TO SPECIFIC PROCESSES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 231 CITATIONS, 163 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285

PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007588

PUBLICATION DATE: DEC 81

TITLE: NITROGEN REMOVAL IN SEWAGE TREATMENT SYSTEMS. 1978-NOVEMBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; AMMONIA STRIPPING; *BIBLIOGRAPHIES; CHLORINATION; *DENITRATION; MICROBIOLOGY; NITRIFICATION; *NITROGEN; *NITROGEN REMOVAL; *OPERATIONS (WASTEWATER); *PROCESS DESIGN; *SEWAGE; TERTIARY SEWAGE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 205P. PB82-802653

ABSTRACT: MOST ASPECTS OF THE REMOVAL OF NITROGEN COMPOUNDS IN SEWAGE TREATMENT SYSTEMS ARE COVERED IN THESE CITATIONS. STUDIES ON BREAKPOINT CHLORINATION, DENITRATION, NITRIFICATION MICROBIOLOGY, TERTIARY SEWAGE TREATMENT, AMMONIA STRIPPING, AND PROCESS DESIGN ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 149 CITATIONS, 49 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007589

PUBLICATION DATE: JUL 81

TITLE: REMOVING TRIHALMETHANES FROM DRINKING WATER - AN OVERVIEW OF TREATMENT TECHNIQUES.

PERSONAL AUTHOR: SYMONS, JAMES M.; AND OTHERS

DESCRIPTOR: ACTIVATED CARBON; CLARIFICATION; *DISINFECTION; *DRINKING WATER; OXIDATION; OZONE; PUBLIC HEALTH; *RESEARCH REPORTS; *TRIHALOMETHANE; *WATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 12P. PB82-132572

ABSTRACT: IN 1974 TRIHALOMETHANES (CHLOROFORM, BROMODICHLOROMETHANE, DIBROMOCHLOROMETHANE, AND BROMOFORM) WERE DISCOVERED TO BE FORMED DURING THE DISINFECTION STEP OF DRINKING WATER IF FREE CHLORINE WAS THE DISINFECTANT. FOR TRIHALOMETHANE PRECURSOR CONTROL, EFFECTIVE PROCESSES ARE: (1) OXIDATION BY OZONE OR CHLORINE DIOXIDE; (2) CLARIFICATION BY COAGULATION, SETTLING AND FILTRATION PRECIPITATIVE SOFTENING, OR DIRECT FILTRATION; OR (3) ADSORPTION BY POWDERED ACTIVATED CARBON OR GRANULAR ACTIVATED CARBON. IN ADDITION, SOME MODEST REMOVAL OR DESTRUCTION OF TRIHALOMETHANE PRECURSORS CAN BE ACHIEVED BY OXIDATION WITH POTASSIUM PERMANGANATE LOWERING THE PH, OR MOVING THE POINT OF CHLORINATION TO THE CLARIFIED WATER. LOWERING OF TRIHALOMETHANE PRECURSOR CONCENTRATIONS HAS THE ADDITIONAL ADVANTAGE OF REDUCING OVERALL DISINFECTANT DEMAND, THEREBY REDUCING THE POSSIBILITY OF THE FORMATION OF ALL DISINFECTION BYPRODUCTS. NEITHER CHLORINE DIOXIDE, NOR OZONE, NOR CHLORAMINES PRODUCE TRIHALOMETHANES AT SIGNIFICANT CONCENTRATIONS WHEN USED ALONE AS DISINFECTANTS. FURTHERMORE, THE COST OF ANY OF THESE UNIT PROCESSES IS VERY LOW. THE MAJOR DISADVANTAGE OF USING ALTERNATE DISINFECTANTS FOR TRIHALOMETHANE CONTROL RELATES TO THE LACK OF ANY PRECURSOR REMOVAL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007590

PUBLICATION DATE: FEB 81

TITLE: CAPDET (COMPUTER ASSISTED PROCEDURES FOR THE DESIGN AND EVALUATION OF WASTEWATER TREATMENT SYSTEMS.)

PERSONAL AUTHOR: TINKHAM, SHARIE L.; GREEN, JOYCE

DESCRIPTOR: *CAPDET; *COMPUTER APPLICATIONS; *COMPUTER PROGRAMS; COSTS; *DECISION MAKING; *DESIGN; *EVALUATION; *FACILITIES; *PLANNING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: MAG TAPE - EPA/DF-81-008; PB82-138520

ABSTRACT: THE CAPDET PROGRAM PROVIDES A STATE-OF-THE-ART TECHNIQUE FOR SCREENING WASTEWATER TREATMENT ALTERNATIVES AND FOR PRELIMINARY COST ESTIMATING AND USER CHARGE ASSESSMENT. THE BASIC OBJECTIVE IS PROVIDING A SCREENING TOOL CAPABLE OF SIMULTANEOUSLY DESIGNING A NUMBER OF WASTEWATER TREATMENT SYSTEM ALTERNATIVES MEETING SPECIFIED EFFLUENT CRITERIA AND SUBSEQUENTLY RANKING THEM ON THE BASIS OF THEIR PRESENT WORTH COST FROM LOWEST TO HIGHEST. CONVEYANCE COSTS ARE NOT CONSIDERED. SOFTWARE DESCRIPTION: THE MODEL IS WRITTEN IN FORTRAN FOR IMPLEMENTATION ON AN IBM 370/168 COMPUTER UNDER OS/VS2.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007591

PUBLICATION DATE: JAN 82

TITLE: EUTROPHICATION. AUGUST, 1977-NOVEMBER, 1981 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *AQUATIC ENVIRONMENTS; *BIBLIOGRAPHIES; *CHEMISTRY; *ECOLOGY; *EUTROPHICATION; *LAKES; MATHEMATICAL MODELING; NUTRIENTS; *POLLUTION CONTROL; *RESEARCH REPORTS; *STREAMS; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 261P. PB82-803511

ABSTRACT: THE SELECTED ABSTRACTS COVER ALL ASPECTS OF EUTROPHICATION, INCLUDING RESEARCH ON PRIMARY PRODUCTIVITY, WATER CHEMISTRY, ECOLOGY, THE INFLUENCE AND IMPACT OF NUTRIENTS ON LAKES AND STREAMS, CONTROL TECHNIQUES, AND MATHEMATICAL MODELING.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007592

PUBLICATION DATE: JAN 82

TITLE: AQUATIC WEED CONTROL. 1964-NOVEMBER, 1981 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; ALGAE; *AQUATIC PLANTS; *BIBLIOGRAPHIES; *ECOLOGICAL FACTORS; *ENVIRONMENTAL IMPACTS; *HERBICIDES; *PESTICIDES; *RESEARCH REPORTS; *WATER QUALITY; *WEED CONTROL

DESCRIPTIVE NOTE: 296P. PB82-803644

ABSTRACT: THE SELECTED CITATIONS COVER HERBICIDE AND BIOLOGICAL WEED CONTROL. THE EFFECTS ON WATER QUALITY AND ECOLOGY ARE DISCUSSED, AS IS THE HARVESTING OF THESE WEEDS. MANY TYPES OF WEEDS ARE COVERED INCLUDING ALGAE BLOOMS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 289 CITATIONS, 74 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007593

PUBLICATION DATE: DEC 81

TITLE: WASTE WATER TREATMENT. JUNE, 1970-1981 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; *EFFLUENTS; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *RECYCLING; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 126P. PB82-859612

ABSTRACT: THIS BIBLIOGRAPHY COVERS METHODS AND TECHNOLOGY FOR THE TREATMENT AND PURIFICATION OF INDUSTRIAL EFFLUENTS AND THE RECYCLING OF VARIOUS EFFLUENT COMPONENTS. EFFLUENTS FROM MINING AND RELATED ACTIVITIES ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 126 CITATIONS, 37 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007594

PUBLICATION DATE: DEC 81

TITLE: WASTE WATER TREATMENT. JUNE, 1976-1981. (CITATIONS FROM THE ENERGY DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; *EFFLUENTS; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *RECYCLING; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 72P. PB82-859620

ABSTRACT: CITATIONS IN THIS BIBLIOGRAPHY COVER TECHNIQUES AND TECHNOLOGY FOR TREATMENT OF INDUSTRIAL (EXCEPT MINING) EFFLUENT STREAMS. CONSIDERATION IS GIVEN TO THE REMOVAL, RECLAMATION, AND RECYCLING OF VARIOUS STREAM COMPONENTS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 59 CITATIONS, 20 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007595

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF BENOMYL AND CARBENDAZIM IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 631.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BENOMYL; *CARBENDAZIM; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 19P. PB82-156068

ABSTRACT: THIS IS A HIGH PERFORMANCE LIQUID CHROMATOGRAPHIC (HPLC) METHOD APPLICABLE TO THE DETERMINATION OF CARBENDAZIM AND BENOMYL IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS ACIDIFIED TO HYDROLYZE BENOMYL TO CARBENDAZIM. THE TOTAL CARBENDAZIM IS EXTRACTED WITH METHYLENE CHLORIDE USING A SEPARATORY FUNNEL. THE EXTRACT IS EXCHANGED TO METHANOL DURING CONCENTRATION. HPLC CONDITIONS ARE DESCRIBED WHICH PERMIT MEASUREMENT WITH AN ULTRAVIOLET DETECTOR.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007596

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF CARBAMATE AND UREA PESTICIDES IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 632.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CARBAMATE; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *MUNICIPAL WASTES; *PESTICIDES; *RESEARCH REPORTS; *UREA PESTICIDES; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 22P. PB82-156084

ABSTRACT: THIS IS A HIGH PERFORMANCE LIQUID CHROMATOGRAPHIC (HPLC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH METHYLENE CHLORIDE USING A SEPARATORY FUNNEL. THE EXTRACT IS EXCHANGED TO METHANOL OR ACETONITRILE DURING CONCENTRATION. HPLC CONDITIONS ARE DESCRIBED WHICH PERMIT MEASUREMENT WITH AN ULTRAVIOLET DETECTOR. A TOTAL OF 21 PESTICIDES ARE INCLUDED IN THE METHOD SCOPE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007597

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF CHLORINATED HERBICIDES IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 615.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHLORINATED HERBICIDES; *DETECTION; *EFFLUENTS; *HERBICIDES; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 24P. PB82-155995

ABSTRACT: THIS IS A GAS CHROMATOGRAPHIC (GC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. AN ACIDIFIED SAMPLE IS SOLVENT EXTRACTED WITH ETHYL ETHER USING A SEPARATORY FUNNEL. ESTERS OF THE ACIDS ARE HYDROLYZED TO THE FREE ACID. THE ACIDS ARE ESTERIFIED WITH DIAZOMETHANE AND DETERMINED BY GC USING AN ELECTRON CAPTURE OR HALIDE DETECTOR. THE COMPOUNDS INCLUDED IN THE METHOD SCOPE ARE THE SALTS, ESTERS, OR ACIDS OF 2,4-D; 2,4-DB; 2,4,5-T; 2,4,5-TP; DALAPON; DICAMBA; DICHLOROPROP; DINOSEB; MCPA; AND MCPP.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007598

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF CYANAZINE IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 629.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CYANAZINE; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *MUNICIPAL WASTES; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 20P. PB82-156043

ABSTRACT: THIS IS A HIGH PERFORMANCE LIQUID CHROMATOGRAPHIC (HPLC) METHOD APPLICABLE TO THE DETERMINATION OF CYANAZINE IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH METHYLENE CHLORIDE USING A SEPARATORY FUNNEL. THE EXTRACT IS EXCHANGED TO METHANOL DURING CONCENTRATION. HPLC CONDITIONS ARE DESCRIBED WHICH PERMIT MEASUREMENT WITH AN ULTRAVIOLET DETECTOR.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007599

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF DITHIOCARBAMATE PESTICIDES IN INDUSTRIAL AND MUNICIPAL WASTEWATERS: METHOD 630.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DETECTION; *DITHIOCARBAMATE; *EFFLUENTS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; *PESTICIDES; RESEARCH REPORTS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 15P. PB82-156050

ABSTRACT: THIS IS A COLORIMETRIC METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40 CFR 136.1. A SAMPLE IS DIGESTED WITH ACID TO YIELD CARBON DISULFIDE BY HYDROLYSIS OF DITHIOCARBAMATES. THE EVOLVED CS2 IS TRAPPED IN A COLOR REAGENT AND ABSORBANCE IS MEASURED AT 380 AND 435 NM. THE COMPOUNDS INCLUDED IN THE METHOD SCOPE ARE: AMOBAM, BUSAN 40, BUSAN 85, FERBAM, KN METHYL, MANCOZEB, MANEB, METHAM, NABAM, NIACIDE, POLYRAM, SODIUM DIMETHYLDITHIOCARBAMATE, THIRAM, ZINEB, AND ZIRAM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007600

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF ORGANOCHLORINE PESTICIDES IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 608.1.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; *ORGANOCHLORINE PESTICIDES; *PESTICIDES; *RESEARCH REPORTS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 23P. PB82-155979

ABSTRACT: THIS IS A GAS CHROMATOGRAPHIC (GC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGERS AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH METHYLENE CHLORIDE USING A SEPARATORY FUNNEL. THE EXTRACT IS EXCHANGED TO HEXANE DURING CONCENTRATION. GC CONDITIONS ARE DESCRIBED WHICH PERMIT MEASUREMENT WITH AN ELECTRON CAPTURE DETECTOR. THE COMPOUNDS INCLUDED IN THE METHOD SCOPE ARE: CHLOROBENZILATE, CHLORONEB, CHLOROPROPYLATE, DIBROMOCHLOROPROPANE, ETRIDIAZOLE, PCNB, AND PROPACHLOR.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007601

PUBLICATION DATE: JAN 82

TITLE: THE DETERMINATION OF ORGANOHALIDE PESTICIDES AND PCBS IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 617.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; *ORGANOHALIDE PESTICIDES; *PCB; *PESTICIDES; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 35P. PB82-156001

ABSTRACT: THIS IS A GAS CHROMATOGRAPHIC (GC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH 15% METHYLENE CHLORIDE IN HEXANE USING A SEPARATORY FUNNEL. THE EXTRACT IS CONCENTRATED, THEN ANALYZED BY GC WITH AN ELECTRON CAPTURE DETECTOR. A TOTAL OF 29 PESTICIDES AND 7 PCBS ARE INCLUDED IN THE METHOD SCOPE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007602

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF ORGANOPHOSPHORUS PESTICIDES IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 614.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *MUNICIPAL WASTES; *ORGANOPHOSPHORUS PESTICIDES; *PESTICIDES; RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 24P. PB82-155987

ABSTRACT: THIS IS A GAS CHROMATOGRAPHIC (GC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH 15% METHYLENE CHLORIDE IN HEXANE USING A SEPARATORY FUNNEL. THE EXTRACT IS CONCENTRATED, THEN ANALYZED BY GC WITH A FLAME PHOTOMETRIC OR PHOSPHORUS/NITROGEN DETECTOR. THE COMPOUNDS INCLUDED IN THE COMPOUNDS INCLUDED IN THE METHOD SCOPE ARE: AZINPHOS METHYL, DEMETON, DIAZINON, DICHLOROFENTHION, DIOXATHION, DISULFOTON, ETHION, MALATHION, PARATHION ETHYL, AND PARATHION METHYL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007603

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF ORGANOPHOSPHORUS PESTICIDES IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 622.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *LABORATORY PROCEDURES; MUNICIPAL WASTES; *ORGANOPHOSPHORUS PESTICIDES; *PESTICIDES; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY; *WATER ANALYSIS

DESCRIPTIVE NOTE: 25P. PB82-156027

ABSTRACT: THIS IS A GAS CHROMATOGRAPHIC (GC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH METHYLENE CHLORIDE USING A SEPARATORY FUNNEL. THE EXTRACT IS CONCENTRATED AND ANALYZED BY GC USING A FLAME PHOTOMETRIC OR PHOSPHORUS/NITROGEN DETECTOR. THE COMPOUNDS INCLUDED IN THE METHOD SCOPE ARE: AZINPHOS METHYL, BOLSTAR, CHLORPYRIFOS, COUMAPHOS, DEMETON, DIAZINON, DICHLORVOS, DISULFOTON, ETHOPROP, FENSULFOTHION, FENTHION, MERPHOS, MEVINPHOS, NALED, PARATHION METHYL, PHORATE, RONNEL, STIROPHOS, TOKUTHION, AND TRICHLORONATE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007604

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF ORGANONITROGEN PESTICIDES IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 633.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; *ORGANONITROGEN PESTICIDES; *PESTICIDES; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 20P. PB82-156076

ABSTRACT: THIS IS A GAS CHROMATOGRAPHIC (GC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH METHYLENE CHLORIDE USING A SEPARATORY FUNNEL. THE EXTRACT IS CONCENTRATED, THEN ANALYZED BY GC WITH A NITROGEN-SPECIFIC DETECTOR. THE COMPOUNDS INCLUDED IN THE METHOD SCOPE ARE: BROMACIL, DEET, HEXAZINONE, METRIBUZIN, TERBACIL, TRIADIMEFON, AND TRICYCLAZOLE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007605

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF TRIAZINE PESTICIDES IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 619.

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; *PESTICIDES; *RESEARCH REPORTS; *TRIAZINE PESTICIDES; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 23P. PB82-156019

ABSTRACT: THIS IS A GAS CHROMATOGRAPHIC (GC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH METHYLENE CHLORIDE USING A SEPARATORY FUNNEL. THE EXTRACT IS CONCENTRATED AND ANALYZED BY GC USING A NITROGEN/PHOSPHORUS OR REDUCTIVE ELECTROLYTIC CONDUCTIVITY DETECTOR. THE COMPOUNDS INCLUDED IN THE METHOD SCOPE ARE: AMETRYN, ATRATON, ATRAZINE, PROMETON, PROMETRYNE, PROPAZINE, SECBUMETON, SIMAZINE, TERBUTHYLAZINE, AND TERBUTRYN.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007606

PUBLICATION DATE: NOV 81

TITLE: PLANNING AND MANAGEMENT OF WATER RESOURCE PROGRAMS. JUNE, 1980-OCTOBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; CONSERVATION; *COSTS; *DRINKING WATER; *GROUNDWATER; IRRIGATION; *MANAGEMENT; *PLANNING; *PROGRAM ADMINISTRATION; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 95P. PB82-801903

ABSTRACT: THE CITED STUDIES COVER PLANNING AND MANAGEMENT OF WATER RESOURCE PROGRAMS AND PROJECTS AT THE LOCAL, REGIONAL, STATE AND NATIONAL LEVEL. WATER QUALITY, DRINKING WATER, IRRIGATION WATER, AND INDUSTRIAL WATER STUDIES OF SPECIFIC LOCALITIES ARE INCLUDED, IF THEY ARE APPLICABLE TO OTHER AREAS. THE TOPICS CONCERN THE IMPACT AND BENEFITS OF WATER RESOURCE DEVELOPMENT, WATER COSTS, WATER CONSERVATION, GROUND WATER MANAGEMENT, DECISION MAKING, AND MODELING. (THIS UPDATED BIBLIOGRAPHY CONTAINS 88 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007607

PUBLICATION DATE: NOV 81

TITLE: ACTIVATED CHARCOAL. 1970-OCTOBER, 1981. (CITATIONS FROM THE ENGINEERING DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *ACTIVATED CHARCOAL; AIR POLLUTION; *BIBLIOGRAPHIES; CHEMISTRY; *INDUSTRY; *LABORATORY EQUIPMENT; MINING; RADIOACTIVE WASTES; *RESEARCH REPORTS; *WASTE TREATMENT

DESCRIPTIVE NOTE: 113P. PB82-801721

ABSTRACT: THE BIBLIOGRAPHY CONTAINS CITATIONS FROM A WORLDWIDE LITERATURE SURVEY PERTAINING TO THE USES OF ACTIVATED CHARCOAL IN INDUSTRY AS WELL AS IN THE LABORATORY, INCLUDING ITS USE IN AIR POLLUTION, CHEMICAL ADSORPTION, RADIOACTIVE WASTE ADSORPTION, ELECTRO-CHEMISTRY, INDUSTRIAL WASTE TREATMENT, AND THE MINING INDUSTRY. (THIS UPDATED BIBLIOGRAPHY CONTAINS 106 CITATIONS, 14 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007608

PUBLICATION DATE: NOV 81

TITLE: ACTIVATED CARBON: OTHER USES. JULY, 1980-OCTOBER, 1981. (CITATIONS FROM THE ENGINEERING DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *ACTIVATED CARBON; AIR POLLUTION; *BIBLIOGRAPHIES; CARBON; *DRINKING WATER; ELECTROCHEMISTRY; MINING; *POLLUTION CONTROL; RADIOACTIVE MATERIALS; *RESEARCH REPORTS; *WATER TREATMENT

DESCRIPTIVE NOTE: 106P. PB82-801754

ABSTRACT: THE USES OF ACTIVATED CARBON FOR OTHER THAN INDUSTRIAL WASTE TREATMENT ARE COVERED IN THIS BIBLIOGRAPHY OF WORLDWIDE RESEARCH. THE CITATIONS COVER THE USE OF ACTIVATED CARBON IN AIR POLLUTION, TEXTILES PROCESSING, ABSORPTION OF CHEMICALS AND RADIOACTIVE ISOTOPES, DRINKING WATER TREATMENT, THE MINING INDUSTRY, AND ELECTROCHEMISTRY.

ITS PROPERTIES ARE ALSO DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 99 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007609

PUBLICATION DATE: NOV 81

TITLE: ACTIVATED CARBON: WASTE WATER TREATMENT. JULY, 1980-OCTOBER, 1981. (CITATIONS FROM THE ENGINEERING INDEX DATA BASE.)

DESCRIPTOR: *ACTIVATED CARBON; *BIBLIOGRAPHIES; CARBON; ECONOMIC FACTORS; *INDUSTRIAL WASTES; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 66P. PB82-801846

ABSTRACT: THESE CITATIONS FROM A WORLDWIDE LITERATURE SURVEY COVER ACTIVATED CARBON AS IT IS USED IN TREATING INDUSTRIAL AND SEWAGE WASTES, RELATIVE TO PROCESS DESCRIPTION, ECONOMICS, MATHEMATICAL MODELS, PERFORMANCE, AND THE PROPERTY CHANGES THE CARBON UNDERGOES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 59 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007610

PUBLICATION DATE: NOV 81

TITLE: ACTIVATED CARBON. 1979-OCTOBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ACTIVATED CARBON; AIR POLLUTION; *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; CARBON; DRINKING WATER; ENGINEERING; *INDUSTRIAL WASTES; *LABORATORY TECHNIQUES; *MUNICIPALITIES; *PERFORMANCE EVALUATION; POLLUTION CONTROL; RADIOACTIVE MATERIALS; *RESEARCH REPORTS; *SEWAGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 189P. PB82-801911

ABSTRACT: THIS BIBLIOGRAPHY CITES REPORTS ON SEWAGE AND INDUSTRIAL WASTE WATER TREATMENT USING ACTIVATED CARBON. THESE HAVE BEEN SEPARATED FROM OTHER USES OF ACTIVATED CARBON. THE FIRST PART CONTAINS BOTH LABORATORY AS WELL AS ENGINEERING STUDIES. THE SECOND PART COVERS OTHER REPORTS ON ACTIVATED CARBON INCLUDING RESEARCH ON ITS PROPERTIES AND ITS USE IN AIR POLLUTION CONTROL, GAS AND WATER ANALYSIS, THE ABSORPTION OF CHEMICALS AND RADIOACTIVE ISOTOPES ESPECIALLY IODINE ISOTOPES, AND DRINKING WATER TREATMENT. (THIS UPDATED BIBLIOGRAPHY CONTAINS 179 CITATIONS, 104 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007611

PUBLICATION DATE: OCT 81

TITLE: THERMAL POLLUTION. CONTROL TECHNIQUES AND GENERAL STUDIES. MARCH, 1980-JUNE, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; EFFLUENTS; *HEAT; INDUSTRIAL WASTES; *POLLUTION CONTROL; *POWER PLANTS; *POLLUTION; REMOTE SENSING; *RESEARCH REPORTS; *THERMAL POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 60P. PB82-800764

ABSTRACT: REPORTS CONCERNED WITH CONTROL TECHNIQUES FOR HEATED EFFLUENTS FROM POWER AND INDUSTRIAL PLANTS ARE CITED. ALSO INCLUDED ARE STUDIES ON GENERAL THERMAL POLLUTION PROBLEMS AND THEIR ABATEMENT. MANY REPORTS ON THE REMOTE SENSING OF THERMAL EFFLUENTS ARE ALSO CITED. HOWEVER, THE CONTROL OF THERMAL POLLUTION BY USING THE WASTE HEAT FOR CONSTRUCTIVE PURPOSES IS NOT COVERED IN THIS BIBLIOGRAPHY. (THHIS UPDATED BIBLIOGRAPHY CONTAINS 52 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007612

PUBLICATION DATE: AUG 81

TITLE: DETERMINATION OF VOLATILE ORGANICS IN INDUSTRIAL AND MUNICIPAL WASTEWATERS.

PERSONAL AUTHOR: WILSON, JERRY L.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; *INDUSTRIAL WASTES; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; *ORGANIC COMPOUNDS; *POLLUTANTS; *RESEARCH REPORTS; *VOLATILE POLLUTANTS; *WASTEWATER; *WATER QUALITY

DESCRIPTIVE NOTE: 81P. PB82-119090

ABSTRACT: THIS REPORT DESCRIBES THE SYSTEMATIC EVALUATION OF A SERIES OF PARAMETERS LEADING TO THE DEVELOPMENT OF A TEST PROCEDURE FOR 36 VOLATILE PRIORITY POLLUTANTS IN WASTEWATERS. A STUDY OF THE EFFECT OF PH, TEMPERATURE, AND RESIDUAL CHLORINE ON THE AQUEOUS STABILITY OF THE COMPOUNDS LEADS TO RECOMMENDED PRESERVATION TECHNIQUES. THE STUDY INCLUDED THE FOLLOWING COMPOUNDS: BENZENE, CHLOROBENZENE, TOLUENE, ETHYLBENZENE, CARBON TETRACHLORIDE, 1,2-DICHLOROETHANE, 1,1,1-TRICHLOROETHANE, 1,1-DICHLOROETHANE, 1,1,2-TRICHLOROETHANE, 1,1,2,2-TETRACHLOROETHANE, CHLOROETHANE, CHLOROFORM, 1,1-DICHLOROETHANE, 1,2-TRANS-DICHLOROETHANE, 1,2-DICHLOROPROPANE, 1,3-CIS-DICHLOROPROPENE, 1,3-TRANS-DICHLOROPROPENE, METHYLENE

CHLORIDE, METHYL CHLORIDE, METHYL BROMIDE, BROMOFORM, DICHLOROBROMOMETHANE, TRICHLOROFLUOROMETHANE, CHLORODIBROMOMETHANE, TETRACHLOROETHENE, TRICHLOROETHENE, VINYL CHLORIDE, 2-CHLOROETHYVINYL ETHER, 2,3-DICHLOROPROPENE, DIBROMOMETHANE, 1-CHLOROCYCLOHEXENE, P-DICHLOROBENZENE, ACROLEIN, ACRYLONITRILE, DICHLORODIFLUOROMETHANE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007613

PUBLICATION DATE: OCT 81

TITLE: GROUND WATER POLLUTION: GENERAL STUDIES. FEBRUARY, 1980-MAY, 1981 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *AQUIFERS; *BIBLIOGRAPHIES; *GROUNDWATER; HYDROLOGY; INJECTION WELLS; LANDFILLS; MINING; MODELING; *POLLUTION CONTROL; *RESEARCH REPORTS; *WATER RESOURCES; WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 110P. PB82-800798

ABSTRACT: THESE REPORTS COVER TOPICS ON GROUND WATER QUALITY, MODELING, HYDROLOGY, POLLUTION FROM LANDFILLS AND INJECTION WELLS, AQUIFER POLLUTION, SOURCES, MINE ACID DRAINAGE, HYDROGEOLOGY, AND POLLUTION ABATEMENT PLANNING. STUDIES DEALING WITH IRRIGATION AND FERTILIZATION ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 102 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007614

PUBLICATION DATE: OCT 81

TITLE: TOXICITY OF MANGANESE. JANUARY, 1970-OCTOBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; CARCINOGENS; DETECTION; *ENVIRONMENTAL IMPACTS; *HEALTH EFFECTS; *MANGANESE; MINING; *POLLUTION; *RESEARCH REPORTS; STANDARDS; *TOXICITY; *TOXIC SUBSTANCES; WATER QUALITY

DESCRIPTIVE NOTE: 139P. PB82-834191

ABSTRACT: THESE REPORTS COVER THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS AND ADVERSE EFFECTS OF MANGANESE. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, STANDARDS, AND REMOVAL FROM THE ENVIRONMENT ARE REPORTED. THESE ASPECTS OF MANGANESE ARE DEALT WITH IN RELATION TO AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, AND IN SUCH AREAS AS MINING OPERATIONS (THIS UPDATED CONTAINS 85 CITATIONS, 15 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS

EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007615

PUBLICATION DATE: OCT 81

TITLE: TOXICITY OF MANGANESE. JANUARY, 1976-OCTOBER, 1981. (CITATIONS FROM THE ENERGY DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; CARCINOGENS; DETECTION; *ENVIRONMENTAL IMPACTS; *HEALTH EFFECTS; *MANGANESE; MINING; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; STANDARDS; *TOXICITY; *TOXIC SUBSTANCES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 119P. PB82-854209

ABSTRACT: THESE REPORTS COVER THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS AND ADVERSE EFFECTS OF MANGANESE. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, STANDARDS, AND REMOVAL FROM THE ENVIRONMENT ARE REPORTED. THESE ASPECTS OF MANGANESE ARE DEALT WITH IN RELATION TO AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, AND IN SUCH AREAS AS MINING OPERATIONS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 88 CITATIONS, 20 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007616

PUBLICATION DATE: OCT 81

TITLE: TOXICITY OF NICKEL. JANUARY, 1970-OCTOBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; CARCINOGENS; *DETECTION; *ENVIRONMENTAL IMPACTS; *HEALTH EFFECTS; *NICKEL; OCCUPATIONAL HAZARDS; *POLLUTION; *RESEARCH REPORTS; STANDARDS; *TOXICITY; *TOXIC SUBSTANCES; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 152P. PB82-854175

ABSTRACT: THESE REPORTS COVER THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION AND OTHER HAZARDS AND ADVERSE EFFECTS OF NICKEL. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, STANDARDS, AND REMOVAL FROM THE ENVIRONMENT ARE REPORTED. THESE ASPECTS OF NICKEL ARE DEALT WITH IN RELATION TO AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, AND IN SUCH AREAS AS OCCUPATIONAL EXPOSURES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 98 CITATIONS, 29 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007617

PUBLICATION DATE: OCT 81

TITLE: TOXICITY OF NICKEL. JANUARY, 1976-OCTOBER, 1981. (CITATIONS FROM THE ENERGY DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; CARCINOGENS; DETECTION; *ENVIRONMENTAL IMPACTS; *HEALTH EFFECTS; *NICKEL; OCCUPATIONAL HAZARDS; *POLLUTION; *RESEARCH REPORTS; STANDARDS; TOXICITY; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 137P. PB82-854183

ABSTRACT: THESE REPORTS COVER THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS AND ADVERSE EFFECTS OF NICKEL. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, STANDARDS, AND REMOVAL FROM THE ENVIRONMENT ARE REPORTED. THESE ASPECTS OF NICKEL ARE DEALT WITH IN RELATION TO AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, AND IN SUCH AREAS AS OCCUPATIONAL EXPOSURES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 151 CITATIONS, 43 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007618

PUBLICATION DATE: OCT 81

TITLE: TOXICITY OF SELENIUM. JANUARY, 1970-OCTOBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; CARCINOGENS; COAL COMBUSTION; *ENVIRONMENTAL IMPACTS; GEOTHERMAL; *HEALTH EFFECTS; *RESEARCH REPORTS; *SELENIUM; STANDARDS; *TOXICITY; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 127P. PB82-854223

ABSTRACT: THESE CITATIONS COVER THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS AND ADVERSE EFFECTS OF SELENIUM. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, STANDARDS, AND REMOVAL FROM THE ENVIRONMENT ARE REPORTED. THESE ASPECTS OF SELENIUM ARE DEALT WITH IN RELATION TO AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, AND IN SUCH AREAS AS THE EFFLUENT FROM COAL FIRED AND GEOTHERMAL POWER PLANTS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 76 CITATIONS, 30 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITON.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007619

PUBLICATION DATE: OCT 81

TITLE: TOXICITY OF ZINC. JANUARY, 1970-OCTOBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AQUATIC ENVIRONMENTS; *BIBLIOGRAPHIES; *HEALTH EFFECTS; *MONITORING; *RESEARCH REPORTS; *TOXICITY; *TOXIC SUBSTANCES; *TRACE ELEMENTS; *TRANSPORT; *ZINC

DESCRIPTIVE NOTE: 229P. PB82-854225

ABSTRACT: THIS BIBLIOGRAPHY COVERS TRANSPORT IN THE ENVIRONMENT, AND TOXIC DOSAGE OF ZINC IONS. HEALTH EFFECTS RELATED TO ZINC UPTAKE ARE DISCUSSED IN STUDIES OF AQUATIC ENVIRONMENT, ANIMAL TESTS, AND HUMAN POPULATIONS. SOME ABSTRACTS DISCUSS EMISSIONS IN THE ATMOSPHERE OF TRACE ELEMENT ZINC, INCLUDING MONITORING TECHINQUES AND EVENTUAL ACCUMULATIONS IN THE ENVIRONMENT. (THIS UPDATED BIBLIOGRAPHY CONTAINS 159 CITATIONS, 25 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007620

PUBLICATION DATE: JAN 82

TITLE: OIL SPILL REMOVAL TECHNIQUES AND EQUIPMENT. 1976-NOVEMBER, 1981. CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *COSTS; *EQUIPMENT; *FACILITIES; *OIL SPILL REMOVAL; *OIL SPILLS; *POLLUTION; *RESEARCH REPORTS; *TECHNIQUES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 165P. PB82-803172

ABSTRACT: THE REMOVAL PROCESSES COVER OIL WATER SEPARATORS, SKIMMERS, DISPERSANTS, ADSORBENTS, FLOTATION AND COMBUSTION. RELATED STUDIES ON OIL SPREADING, DROPLET ENTRAINMENT, PROTOTYPE REMOVAL SYSTEMS, EQUIPMENT AND COSTS ARE ALSO PRESENTED. OIL WATER SEPARATORS DESIGNED ONLY FOR TANKER BALLAST WATER CLEANING ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 158 CITATIONS, 27 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITON.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007621

PUBLICATION DATE: JAN 82

TITLE: OCEAN WASTE DISPOSAL. AUGUST, 1980-DECEMBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *BIBLIOGRAPHIES; *DREDGING; *INDUSTRIAL WASTES;

NEW YORK BIGHT; *OCEANS; *OCEANOGRAPHY; *POLLUTION; RADIOACTIVE MATERIALS; *RESEARCH REPORTS; *SEWAGE; *SLUDGE; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 81P. PB82-803222

ABSTRACT: THE MAIN TOPICS COVER THE OCEAN DISPOSAL OF SEWAGE, SEWAGE SLUDGE, AND DREDGED MATERIAL. ALTHOUGH REPORTS ON THE DISPOSAL OF RADIOACTIVE WASTES, BRINES AND INDUSTRIAL WASTES ARE ALSO INCLUDED. THE ECOLOGICAL AFFECTS ARE GIVEN, AS IS RESEARCH ON THE POLLUTION OF THE NEW YORK BIGHT. HOWEVER, STUDIES ON THE DISCHARGE OF HEATED EFFLUENTS ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 174 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007622

PUBLICATION DATE: JUN 81

TITLE: THE FEASIBILITY OF CONVERTING THE SMALL BIOLOGICAL WASTEWATER TREATMENT PLANTS INTO PHYSICAL-CHEMICAL PLANTS.

PERSONAL AUTHOR: LONG, DAVID A.; WHITE, FREDERICK E.

DESCRIPTOR: *BIOLOGICAL TREATMENT; *COSTS; *DESIGN; EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PHYSICAL CHEMICAL TREATMENT; *PILOT PLANTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 133P. PB82-108465

ABSTRACT: MANY PARKS AND RECREATION AREAS HAVE INSTALLED WASTEWATER TREATMENT PLANTS USING THE EXTENDED AERATION ACTIVATED SLUDGE PROCESS. BECAUSE OF EXTREME LOAD VARIATIONS AND PERIODIC LOW FLOWS, BIOLOGICAL SYSTEMS OFTEN DO NOT TREAT THESE WASTEWATERS SUFFICIENTLY TO MEET CURRENT DISCHARGE REQUIREMENTS. AS AN ALTERNATIVE, THE PHYSICAL-CHEMICAL TREATMENT (PCT) PROCESS OFFERS THE ADVANTAGE OF ON-OFF OR VARIABLE RATE OPERATION WITH NO APPRECIABLE LOSS IN TREATMENT QUALITY. PILOT PLANT STUDIES WERE RUN IN ORDER TO CONFIRM THE POTENTIAL USE OF THE PCT PROCESS AND TO OBTAIN INFORMATION FOR DESIGN PURPOSES. THE PROJECTED CAPITAL COST IS $45,460 FOR CONVERTING A 100,000 GPD CONVENTIONAL BIOLOGICAL PLANT TO A SCHEME INCLUDING CHEMICAL COAGULATION, SEDIMENTATION, FILTRATION, DOWNFLOW GRANULAR ACTIVATED CARBON CONTACT AND A SLUDGE STORAGE TANK. ON AN ANNUAL COST BASIS, THE CONVERSION TO A PCT PLANT IS COST EFFECTIVE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007623

PUBLICATION DATE: SEP 81

TITLE: PERFORMANCE OF ACTIVATED SLUDGE PROCESSES: RELIABILITY, STABILITY AND VARIABILITY.

PERSONAL AUTHOR: NIKU, SALAR; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; *DESIGN; *MATHEMATICAL MODELS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 165P. PB82-109604

ABSTRACT: THE OBJECTIVE OF THIS RESEARCH STUDY WAS TO STATISTICALLY ANALYZE THE PERFORMANCE OF A LARGE NUMBER OF ACTIVATED SLUDGE PROCESSES AND TO DEVELOP METHODS AND PROCEDURES FOR INTRODUCING RELIABILITY AND STABILITY CONCEPTS INTO DESIGN AND OPERATION OF TREATMENT PLANTS. THE PROPOSED MODEL CAN BE USED IN DESIGN OF A TREATMENT PROCESS EXPECTED TO PERFORM AT A CERTAIN RELIABILITY AND/OR TO ESTIMATE THE RELIABILITY OF AN OPERATING TREATMENT PLANT. THE STABILITY OF VARIOUS ACTIVATED SLUDGE PROCESSES WAS EXAMINED USING SEVERAL STATISTICAL MEASURES. THE STANDARD DEVIATION WAS FOUND TO BE THE MOST APPROPRIATE INDICATOR OF STABILITY. PLANTS WITH EFFLUENT VALUES BELOW 10 G/CU M ARE CONSIDERED UNSTABLE. THE USE OF THE GEOMETRIC MEAN, AS A MEASURE OF CENTRAL TENDENCY OF DAILY EFFLUENT QUALITY DATA, WAS RECOMMENDED FOR SETTING DISCHARGE STANDARDS. AN APPROACH IS PRESENTED THAT CAN BE USED TO DESIGN A PROCESS STOCHASTICALLY WHEN THE EFFLUENT STANDARDS ARE DETERMINISTIC IN NATURE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007624

PUBLICATION DATE: OCT 81

TITLE: TOXICITY OF COBALT. JANUARY, 1970-OCTOBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ABSTRACTS; *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; CARCINOGENS; *COBALT; DETECTION; *ENVIRONMENTAL IMPACTS; *HEALTH EFFECTS; *POLLUTION; *RESEARCH REPORTS; STANDARDS; *TOXICITY; *TOXIC SUBSTANCES; WATER QUALITY

DESCRIPTIVE NOTE: 85P. PB82-855404

ABSTRACT: THIS BIBLIOGRAPHY CITES REPORTS CONCERNING THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER ADVERSE EFFECTS OF COBALT. THE DETECTION, ANALYTICAL METHODS, AND STANDARDS ARE CONSIDERED, AND METHODS OF REMOVAL FROM THE ENVIRONMENT ARE DISCUSSED. THE EFFECTS ON AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, ARE CONSIDERED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 49 CITATIONS, 18 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007625

PUBLICATION DATE: OCT 81

TITLE: BIOLOGICAL EFFECTS OF MERCURY POLLUTION. JUNE, 1980-SEPTEMBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ANIMALS; *ABSTRACTS; *BIBLIOGRAPHIES; *BIOLOGICAL EFFECTS; *BIOACCUMULATION; *ENVIRONMENTAL IMPACTS; *HEALTH EFFECTS; *HUMANS; *MERCURY; MICROBIOLOGY; OCCUPATIONAL HAZARDS; *PLANTS; *RESEARCH REPORTS; *TOXICITY; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 61P. PB82-800889

ABSTRACT: THE SELECTED ABSTRACTS COVER MERCURY TOXICITY, POISONING, ADSORPTION, EXCRETION, BIOACCUMULATION, AND CONCENTRATION LEVELS IN VARIOUS PLANTS, ANIMALS, MICROORGANISMS, AND HUMANS. TOPICS ALSO INCLUDE TOXIC HAZARDS, OCCUPATIONAL SAFETY AND HEALTH, MICROBIAL DEGRADATION AND ENVIRONMENTAL HEALTH. (THIS UPDATED BIBLIOGRAPHY CONTAINS 56 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007626

PUBLICATION DATE: JUL 81

TITLE: MUNICIPAL WASTEWATER: RESEARCH STRATEGY SUPPLEMENT, 1981-1985.

DESCRIPTOR: *MUNICIPALITIES; *OPERATIONS (WASTEWATER); PLANNING; PROBLEM SOLVING; *REQUIREMENTS; *RESEARCH NEEDS; *STATE-OF-THE-ART REVIEWS; *STRATEGIES; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 241P. PB82-120106

ABSTRACT: THE PURPOSE OF THIS DOCUMENT IS TO IDENTIFY THE REQUIREMENTS FOR RESEARCH DEVELOPMENT SUPPORT OF PROGRAM OFFICE ACTIVITIES AND TO PRESENT HOW ORD IS RESPONDING OR INTENDS TO RESPOND TO THE IDENTIFIED REQUIREMENTS. BOTH SHORT-TERM REQUIREMENTS AND RESEARCH RESPONSES AND LONG-RANGE RESEARCH PLANNING ARE PRESENTED. THESE PLANS ARE BASED ON PERCEPTIONS OF RESEARCH NECESSARY TO ADDRESS ANTICIPATED PROBLEMS OR TECHNOLOGY NEEDS AT THE TIME OF THE REPORT. THIS DOCUMENT RESULTED FROM THE EFFORTS OF THE MUNICIPAL WASTEWATER RESEARCH COMMITTEE. IT REPRESENTS A CONSENSUS VIEW OF THE RESEARCH AND DEVELOPMENT RELATING TO MUNICIPAL WASTEWATER NEEDS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007627

PUBLICATION DATE: 81

TITLE: ANALYTICAL METHODS EVALUATION FOR APPLICABILITY IN LEACHATE ANALYSIS.

PERSONAL AUTHOR: DEWALLE, FOPPE B.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *EVALUATION; *LABORATORY PROCEDURES; *LABORATORY TECHNIQUES; *LEACHATES; *QUALITY CONTROL; *RESEARCH REPORTS; *STATISTICAL ANALYSIS

DESCRIPTIVE NOTE: PB81-172306

ABSTRACT: THIRTY-TWO LABORATORIES IN THE UNITED STATES AND CANADA CONDUCTED ROUND-ROBIN ANALYSES OF LEACHATE SAMPLES. SAMPLES WERE ANALYZED FOR UP TO 28 PARAMETERS TO EVALUATE ACCURACY AND PRECISION OF THE METHODS EMPLOYED. THE 28 PARAMETERS INCLUDED PHYSICAL PARAMETERS (PH, OXIDATION REDUCTION POTENTIAL, CONDUCTIVITY, TURBIDITY, AND SOLIDS), ORGANICS (CHEMICAL OXYGEN DEMAND, TOTAL ORGANIC CARBON, ORGANIC NITROGEN, AND FREE VOLATILE FATTY ACIDS), ANIONS (SULFATE, PHOSPHATE, CHLORIDE, NITRATE, AND BICARBONATE), AND CATIONS (ALKALI METALS, ALKALINE EARTH METALS, TRANSITION METALS, AND HEAVY METALS). THE MOST APPLICABLE METHOD FOR ANALYSIS OF EACH PARAMETER IS RECOMMENDED. USE OF THE STANDARD ADDITION TECHNIQUE IS REQUIRED IN EACH LABORATORY TO DETERMINE THE MATRIX DEPRESSION OR ENHANCEMENT FOR EACH TYPE OF LEACHATE SAMPLE. THE ACCURACY (I.E., AGREEMENT BETWEEN MEASURED AND ACTUAL AMOUNTS) AND THE PRECISION (I.E., REPRODUCIBILITY) OF DIFFERENT ANALYTICAL METHODS WERE EVALUATED IN DEPTH. THIRTY-TWO LABORATORIES SUBMITTED FINAL ANALYTICAL RESULTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007628

PUBLICATION DATE: 81

TITLE: ELECTROPLATING WASTEWATER SLUDGE CHARACTERIZATION.

PERSONAL AUTHOR: MEREDITH, J. W.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; *ELECTROPLATING; *HEAVY METALS; *INDUSTRIAL WASTES; *LEACHING; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE; *WASTEWATER ANALYSIS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: PB81-190928

ABSTRACT: THIS PROJECT WAS INITIATED TO PROVIDE INFORMATION CONCERNING THE PHYSICAL AND CHEMICAL CHARACTERISTICS OF ELECTROPLATING WASTEWATER TREATMENT SLUDGES AND THEIR PERFORMANCE IN A LEACHING ENVIRONMENT. TWO VARIABLES WERE FOUND TO HAVE A MAJOR EFFECT ON THE RESULTS OBTAINED BY THE LEACHING PROCEDURES TESTED DURING PHASE I: THE COMPOSITION AND AMOUNT OF FREE AND INTERSTITIAL WASTEWATER PRESENT IN THE SLUDGE, AND THE PH OF THE FINAL EXTRACT. IN GENERAL, IT

WAS FOUND THAT ELECTROPLATING WASTEWATER TREATMENT SLUDGES DO NOT LEACH HEAVY METALS AT A SIGNIFICANT RATE WHEN DEIONIZED WATER IS USED AS THE LEACHING MEDIUM. MIDLY ACIDIFIED LEACHING WATER RESULTS IN HIGHER RATES OF METAL LEACHING. A SAMPLE OF COMBINED LEACHATE AND RUNOFF FROM A REAL WORLD SEGREGATED HYDROXIDE LANDFILL WAS FOUND BY ANALYSES TO PASS DRINKING WATER STANDARDS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007629

PUBLICATION DATE: 81

TITLE: ENGINEERING ASSESSMENT OF VERICOMPOSTING MUNICIPAL WASTEWATER SLUDGES.

PERSONAL AUTHOR: DONOVAN, JOHN

DESCRIPTOR: *CASE STUDIES; *COSTS; *EARTHWORMS; ENGINEERING; *MUNICIPALITIES; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE; *VERICOMPOSTING; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-196933

ABSTRACT: VERMICOMPOSTING, THE BIOLOGICAL DEGRADATION OF ORGANIC MATTER THAT OCCURS AS EARTHWORMS FEED ON WASTE MATERIALS, HAS BEEN ADVOCATED BY SOME AS A MEANS OF STABILIZING AND DISPOSING OF MUNICIPAL WASTEWATER SLUDGES. BASED ON REVIEW OF AVAILABLE LITERATURE, DISCUSSIONS WITH PRACTITIONERS, AND VISITS TO SITES WHERE VERMICOMPOSTING IS BEING ATTEMPTED ON AN EXPERIMENTAL SCALE, THE PROCESS HAS BEEN FOUND TO BE FEASIBLE AND POTENTIALLY COMPETITIVE ECONOMICALLY WITH CONVENTIONAL SLUDGE STABILIZATION TECHNIQUES SUCH AS LAND SPREADING OF LIQUID SLUDGE AND STATIC PILE COMPOSTING. THE QUESTION OF WHETHER VERMICOMPOSTING IS EQUIVALENT OF CONVENTIONAL PROCESSES IN STABILIZING SLUDGE AND REDUCING THE PATHOGENS IN IT REMAINS TO BE ANSWERED AT DEMONSTRATION SCALE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007630

PUBLICATION DATE: 81

TITLE: LIME STABILIZATION AND ULTIMATE DISPOSAL OF MUNICIPAL WASTEWATER SLUDGES.

PERSONAL AUTHOR: OTOSKI, ROBERT M.

DESCRIPTOR: LAND APPLICATION; *LIME; *LIME STABILIZATION; *MUNICIPALITIES; ODORS; PATHOGENS; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-198160

ABSTRACT: THIS REPORT DOCUMENTS THE SUCCESSFUL USE OF LIME TO STABILIZE SLUDGE AT 28 MUNICIPAL WASTEWATER TREATMENT PLANTS. SLUDGE STABILIZED WITH LIME CAN BE SIMPLE AND INEXPENSIVE AND CAN BE USED AS A BACKUP OR INTERIM SYSTEM, OR TO UPGRADE A SYSTEM, OR INSTITUTED AS A LESS COSTLY SYSTEM. BACTERIAL ANALYSES DEMONSTRATED THAT LIMING A SLUDGE TO PH OF 12 IS AN EFFECTIVE MEANS OF INACTIVATING TOTAL AND FECAL COLIFORM, ALTHOUGH ORGANISMS CAN REGROW AS THE PH DROPS IN STOCKPILED SLUDGE. THE LIME-STABILIZED PRODUCT CAN BE LANDFILLED, LAND APPLIED AS A LIQUID SLUDGE OR AS A CAKE, OR STOCKPILED BEFORE LANDFILLING OR LAND APPLICATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007631

PUBLICATION DATE: 81

TITLE: FACULTATIVE LAGOON EFFLUENT POLISHING USING PHASE ISOLATION PONDS.

PERSONAL AUTHOR: MCGRIFF, E. CORBIN, JR.

DESCRIPTOR: *CASE STUDIES; *LAGOONS; MUNICIPALITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PHASE ISOLATION; *PONDS; *RESEARCH REPORTS; *SECONDARY TREATMENT; *STANDARDS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: PB81-205965

ABSTRACT: THE PERFORMANCE OF "PHASE ISOLATION" LAGOONS WAS INVESTIGATED AT CLINTON, MISSISSIPPI, FROM MAY 1978 TO MAY 1979. THE STUDY SYSTEM CONSISTED OF TWO FACULATIVE LAGOONS ARRANGED IN SERIES FOLLOWED BY TWO ISOLATION PONDS USED ALTERNATELY FOR FINAL POLISHING. THE ISOLATION PONDS WERE OPERATED ON A FILL AND DRAW BASIS WITH ISOLATION PERIODS VARYING FROM 20 TO 44 DAYS. THE STUDY INDICATED THAT PHASE ISOLATION WOULD NOT CONSISTENTLY MEET THE NATIONAL PERMIT DISCHARGE EFFLUENT SYSTEM (NPDES) LIMITATIONS OF 15 MG/L-BOD5, 30 MG/L-TSS, AND 5 MG/L-TKN-N ESTABLISHED FOR CLINTON. THE ISOLATION PROCESS DID, HOWEVER, DEMONSTRATE ITS ABILITY TO PRODUCE THE FOLLOWING AVERAGE EFFLUENT: POND 1, 11 MG/L-BOD5, 39 MG/L-TSS, AND 3.7 MG/L-TKN-N; AND POND 2, 13 MG/L-BOD5, 36 MG/L-TSS, AND 3.9 MG/L-TKN-N.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007633

PUBLICATION DATE: SEP 77

TITLE: CONTROL OF SEWER OVERFLOWS BY POLYMER INJECTION.

DESCRIPTOR: *ALTERNATIVE SYSTEMS; *COLLECTION SYSTEMS; *FACILITIES; *MAINTENANCE; *OPERATIONS (WASTEWATER); PIPES; *POLYMER INJECTION; *POLYMERS; *RESEARCH REPORTS; *SEWERS; *WASTEWATER COLLECTION; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 180P.

ABSTRACT: SUGGESTED IN THIS RESEARCH REPORT IS A POSSIBLE ALTERNATIVE SYSTEM FOR INCREASING THE CAPACITY OF A SEWER BY THE INJECTION OF FRICTION-REDUCING CHEMICALS TO REDUCE TURBULENT FRICTION AND PREVENT OR LIMIT OVERFLOWS IN A WORKING SEWER LINE. THE REPORT SUGGESTS ESTABLISHING AN AUTOMATIC INJECTION SYSTEM FOR THE MATERIALS. DISCUSSED ARE METHODS OF POLYMER FEED CONTROL, DOSAGES, POLYMER TYPES AND MIXING PROPERTIES, AND PROBLEMS LIMITING THE USEFULNESS OF POLYMER INJECTION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007635

PUBLICATION DATE: APR 76

TITLE: PROCESS DESIGN MANUAL FOR PHOSPHORUS REMOVAL.

DESCRIPTOR *CHEMICAL PRECIPITATION; CHEMICAL REACTIONS; *COSTS; *DESIGN; *EQUIPMENT; EUTROPHICATION; *FACILITIES; LIME; *OPERATIONS (WASTEWATER); PERFORMANCE DATA; *PHOSPHOROUS REMOVAL; *PHOSPHOROUS; UTILITIES; WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 290P.

ABSTRACT: DISCUSSED ARE PHOSPHOROUS REMOVAL METHODS FOUND TO BE EFFECTIVE AND PRACTICAL FOR USE AT TREATMENT PLANTS. ALL OF THE METHODS INVOLVE CHEMICAL PRECIPITATION OF THE PHOSPHOROUS AND REMOVAL OF THE RESULTANT PRECIPITATE. PRECIPITANTS INCLUDE SALTS OF ALUMINUM, IRON, AND LIME. INCLUDED IN A DISCUSSION OF EACH TREATMENT METHOD ARE A DESCRIPTION OF THE METHOD, PILOT OR FULL-SCALE PERFORMANCE DATA, EQUIPMENT REQUIREMENTS, DESIGN PARAMETERS, AND COSTS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW007636

PUBLICATION DATE: SEP 79

TITLE: PROCESS DESIGN MANUAL - SLUDGE TREATMENT AND DISPOSAL.

DESCRIPTOR: DESIGN; *DESIGN METHODOLOGY; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *PROCESS CONTROL; SLUDGE; *SLUDGE DISPOSAL; *SLUDGE TREATMENT; SOLID WASTES; *TECHNOLOGY; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 1132P.

ABSTRACT: PRESENTED IS A CONTEMPORARY REVIEW OF SLUDGE PROCESSING TECHNOLOGY WITH PARTICULAR EMPHASIS ON DESIGN METHODOLOGY. INCORPORATED ARE CHAPTERS ON DESIGN APPROACH, WASTEWATER SOLIDS PRODUCTION AND CHARACTERIZATION, THICKENING, STABILIZATION, DISINFECTION, CONDITIONING, DEWATERING, HEAT DRYING, HIGH TEMPERATURE PROCESSES, COMPOSTING, TRANSPORTATION, STORAGE, SIDESTREAMS FROM SOLIDS TREATMENT PROCESSES, INSTRUMENTATION, UTILIZATION, AND DISPOSAL TO LAND. EMPHASIS IS PLACED ON THE TREATMENT AND DISPOSAL OF MUNICIPAL WASTEWATER SOLIDS, INCLUDING GRIT, SCUM, SCREENINGS, PRIMARY SLUDGES, BIOLOGICAL SLUDGES, CHEMICAL SLUDGES AND SEPTAGE. DESIGN EXAMPLES ARE USED TO ILLUSTRATE DESIGN PRINCIPLES.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW007640

PUBLICATION DATE: 82

TITLE: PURDUE 36TH INDUSTRIAL WASTE CONFERENCE PROCEEDINGS.

DESCRIPTOR: AGRICULTURE; *CHEMICALS; *CONFERENCE PROCEEDINGS; FOODS; *HAZARDOUS MATERIALS; *INDUSTRIAL WASTES; METALS; *RESEARCH REPORTS; *TECHNICAL PAPERS; *TOXIC SUBSTANCES; *UTILITIES; *WASTE DISPOSAL; *WASTES; *WASTEWATER

DESCRIPTIVE NOTE: 997P. PRICE: $69.95

ABSTRACT: COMPILED IN THIS VOLUME ARE 93 TECHNICAL PAPERS PRESENTED AT THE 36TH INDUSTRIAL WASTE CONFERENCE SPONSORED BY THE SCHOOL OF CIVIL ENGINEERING OF PURDUE UNIVERSITY. THE PAPERS ARE GROUPED INTO 20 SECTIONS ACCORDING TO SPECIFIC CATEGORIES OF INDUSTRIAL WASTES; INCLUDED ARE AGRICULTURAL WASTES, CHEMICAL WASTES, FOOD WASTES, METAL WASTES AND POWER PLANT WASTES.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007641

PUBLICATION DATE: 82

TITLE: WATER RESOURCE MANAGEMENT.

PERSONAL AUTHOR: NEWELL, R. A.; AND OTHERS

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *COMPUTERS; *DEVELOPING NATIONS; FISHERIES; *INFORMATION SOURCES; *IRRIGATION; *MANAGEMENT; MODELS; *NATURAL RESOURCES; SANITATION; *SYSTEMS APPROACH; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 71P. PRICE: $10.00

ABSTRACT: PROVIDED IS AN INFORMATION SOURCE ON COMPUTER AIDED WATER RESOURCE DEVELOPMENT AND MANAGEMENT TECHNIQUES THAT HAVE BEEN, OR COULD BE, USED IN LESS DEVELOPED COUNTRIES. REFERENCES LISTED ARE GENERALLY FOR THE TIME PERIOD 1977-1982; BUT, SOME IMPORTANT EARLIER TITLES HAVE BEEN INCLUDED. THE CITATIONS ARE GROUPED INTO 13 SUBJECT

AREAS ACCORDING TO A PARTICULAR ASPECT OF WATER RESOURCES; SUCH AS DRAINAGE AND IRRIGATION, WATER SUPPLY SYSTEMS, MODELLING AND SYSTEMS ANALYSIS, PROCESS CONTROL, DATA MANAGEMENT AND WATER RESOURCE MANAGEMENT.

AVAILABILITY: HEYDEN & SONS, INC., 247 41ST STREET, PHILADELPHIA, PA 19104

IRIS ACCESSION NUMBER: EW007645

PUBLICATION DATE: DEC 81

TITLE: USER CHARGE REVENUES FOR WASTEWATER TREATMENT PLANTS--INSUFFICIENT TO COVER OPERATION AND MAINTENANCE.

DESCRIPTOR: *COST EFFECTIVENESS; *COSTS; EQUIPMENT; *FACILITIES; *FEDERAL GOVERNMENT; *FINANCING; *MANAGEMENT; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *RATES; *RESEARCH REPORTS; *USER CHARGES; *UTILITIES; *WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 35P. FIRST FIVE (5) COPIES OF INDIVIDUAL REPORTS ARE FREE OF CHARGE.

ABSTRACT: PRESENTED ARE THE RESULTS OF A STUDY CONDUCTED BY THE GENERAL ACCOUNTING OFFICE TO DETERMINE WHETHER THE USER CHARGE REVENUES COLLECTED BY 36 MUNICIPALITIES IN 10 STATES ARE SUFFICIENT TO PROPERLY OPERATE AND MAINTAIN THE WASTEWATER TREATMENT PLANTS. ALSO INVESTIGATED WERE THE FAIR AND EQUITABLE DISTRIBUTION OF COSTS AMONG SYSTEM USERS AND THE PRESENCE OF SUFFICIENT REVENUES TO REPLACE MAJOR CAPITAL ITEMS IN PLANTS SUCH AS EQUIPMENT. THE ISSUE OF THE FINANCIAL RESPONSIBILITY FOR THE REPLACEMENT OF TREATMENT PLANTS WHEN THEY REACH THE EXTENT OF THEIR ECONOMICAL/TECHNOLOGICAL LIFE IS ADDRESSED.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DOCUMENT HANDLING AND INFORMATION SERVICES FACILITY, P. O. BOX 6015, GAITHERSBURG, MD 20760

IRIS ACCESSION NUMBER: EW007646

PUBLICATION DATE: DEC 81

TITLE: EPA SLOW IN CONTROLLING PCBS.

DESCRIPTOR: *AGENCIES; *CHEMICALS; *ENVIRONMENTAL PROTECTION AGENCY; *FEDERAL GOVERNMENT; *HAZARDOUS MATERIALS; *POLYCHLORINATED BIPHENYLS; *PROGRAM EVALUATION; *REGULATIONS; RESEARCH REPORTS; *TOXIC SUBSTANCES; *WASTE DISPOSAL; *WASTES

DESCRIPTIVE NOTE: 31P. FIRST FIVE (5) COPIES OF INDIVIDUAL REPORTS ARE FREE OF CHARGE.

ABSTRACT: SUMMARIZED IS A STUDY CONDUCTED BY THE GENERAL ACCOUNTING OFFICE TO DETERMINE THE EFFECTIVENESS OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S PROGRAM TO CONTROL THE USE AND DISPOSAL OF POLYCHLORINATED BIPHENYLS (PCB'S). INCLUDED ARE RECOMMENDATIONS AIMED AT STRENGTHENING CONTROLS FOR THE SAFE USE AND PROPER DISPOSAL OF PCB'S AND IMPROVING USEPA PROGRAM DIRECTION.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DOCUMENT HANDLING AND INFORMATION SERVICES FACILITY, P. O. BOX 6015, GAITHERSBURG, MD 20460

IRIS ACCESSION NUMBER: EW007647

PUBLICATION DATE: SEP 79

TITLE: WATER DISTRIBUTION SYSTEMS OPERATION AND MAINTENANCE - INSTRUCTOR'S MANUAL.

DESCRIPTOR: ADMINISTRATION; EQUIPMENT MAINTENANCE; *INSTRUCTIONAL MATERIALS; *JOB TRAINING; LEARNING MODULES; *MAINTENANCE; *POST SECONDARY EDUCATION; UTILITIES; *WATER RESOURCES; *WATER DISTRIBUTION; WATER QUALITY MANAGEMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 293P.

ABSTRACT: THIS INSTRUCTOR'S MANUAL COVERS A SERIES OF EIGHT TRAINING MODULES DEVELOPED TO PROVIDE BASIC TRAINING TO WATER DISTRIBUTION SYSTEM PERSONNEL. THE TRAINING MODULES INCLUDE: (1) OVERVIEW OF WATER PRODUCTION, DISTRIBUTION AND STORAGE; (2) WATER QUALITY; (3) INSTALLATION, REPAIR AND MAINTENANCE OF WATER MAINS; (4) REPAIR AND MAINTENANCE OF EQUIPMENT; (5) SERVICE CONNECTIONS AND WATER METERS; (6) CROSS CONNECTION CONTROL; (7) WINTER OPERATION; AND (8) SAFETY AND RECORD KEEPING. EACH MODULE CONTAINS INSTRUCTIONAL OBJECTIVES, GLOSSARY, REFERENCES, AND A SELF-TEST.

AVAILABILITY: MINNESOTA DEPARTMENT OF HEALTH, DIVISION OF ENVIRONMENTAL HEALTH, SECTION OF WATER SUPPLY AND GENERAL ENGINEERING, 717 S.E. DELAWARE STREET, MINNEAPOLIS, MN 55440

IRIS ACCESSION NUMBER: EW007658

PUBLICATION DATE: SEP 81

TITLE: WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS): A COMPILATION OF ABSTRACTS TO WATER QUALITY AND WATER RESOURCES MATERIALS. SUPPLEMENT VII (1981).

DESCRIPTOR: AUDIOVISUAL AIDS; CITIZEN PARTICIPATION; ENVIRONMENTAL EDUCATION; *INFORMATION DISSEMINATION; *INSTRUCTIONAL MATERIALS; PESTICIDES; POST SECONDARY EDUCATION; *RESOURCE MATERIALS; SCIENCE EDUCATION; TECHNICAL EDUCATION; *WASTE DISPOSAL; *WATER POLLUTION; WATER RESOURCES; HAZARDOUS MATERIALS; *WASTEWATER TREATMENT; *WATER QUALITY; WATER SUPPLY

DESCRIPTIVE NOTE: SUBSCRIPTION: $12.00; $4.00 EACH

ABSTRACT: COMPILED ARE ABSTRACTS AND INDEXES TO SELECTED MATERIALS RELATED TO WASTEWATER TREATMENT AND WATER QUALITY EDUCATION AND INSTRUCTION AS WELL AS SOME MATERIALS RELATED

TO PESTICIDES, HAZARDOUS WASTES, AND PUBLIC PARTICIPATION. ALSO INCLUDED ARE PROCEDURES TO ILLUSTRATE HOW INSTRUCTORS AND CURRICULUM DEVELOPERS IN THE WATER QUALITY CONTROL FIELD CAN USE THE WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS) TO LOCATE INSTRUCTIONAL MATERIALS TO MEET VERY GENERAL OR HIGHLY SPECIFIC REQUIREMENTS IN THEIR PROGRAMS. (SEE ED 182 111, ED 195 448-450, ED 199 076, ED 200 456, AND ED 209 104)

AVAILABILITY: EPA INFORMATION DISSEMINATION PROJECT, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007663

PUBLICATION DATE: JUN 81

TITLE: WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS): A COMPILATION OF ABSTRACTS TO WATER QUALITY AND WATER RESOURCES MATERIALS. SUPPLEMENT VI (1981).

DESCRIPTOR: *AUDIOVISUAL AIDS; CITIZEN PARTICIPATION; ENVIRONMENTAL EDUCATION; *INFORMATION DISSEMINATION; *INSTRUCTIONAL MATERIALS; PESTICIDES; POST SECONDARY EDUCATION; SCIENCE EDUCATION; TECHNICAL EDUCATION; *WASTE DISPOSAL; *WATER POLLUTION; WATER RESOURCES; HAZARDOUS MATERIALS; *WASTEWATER TREATMENT; *WATER QUALITY; WATER SUPPLY

DESCRIPTIVE NOTE: SUBSCRIPTION: $12.00; $4.00 EACH

ABSTRACT: COMPILED ARE ABSTRACTS AND INDEXES TO SELECTED MATERIALS RELATED TO WASTEWATER TREATMENT AND WATER QUALITY EDUCATION AND INSTRUCTION AS WELL AS SOME MATERIALS RELATED TO PESTICIDES, HAZARDOUS WASTES, AND PUBLIC PARTICIPATION. ALSO INCLUDED ARE PROCEDURES TO ILLUSTRATE HOW INSTRUCTORS AND CURRICULUM DEVELOPERS IN THE WATER QUALITY CONTROL FIELD CAN USE THE WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS) TO LOCATE INSTRUCTIONAL MATERIALS TO MEET VERY GENERAL OR HIGHLY SPECIFIC REQUIREMENTS IN THEIR PROGRAMS. (SEE ED 182 111, ED 195 448-450, ED 199 076, AND ED 200 456)

AVAILABILITY: EPA INFORMATION DISSEMINATION PROJECT, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007669

PUBLICATION DATE: APR 82

TITLE: SEWAGE PUMPING STATION SPLIT FOR MAINTENANCE.

PERSONAL AUTHOR: BOWELL, JAMES C.; WOOD, SAM

DESCRIPTOR: *CASE STUDIES; *DESIGN; EQUIPMENT; *FACILITIES; *MAINTENANCE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PUMPING STATION; *SEWAGE; *SEWERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 60-61P.

ABSTRACT: THIS ARTICLE REPORTS ON THE USE OF A DUAL-FLOW DESIGNED 160-MGD SEWAGE PUMPING STATION. THE SEWAGE RECEIVING BASIN IS SPLIT INTO TWO IDENTICAL WET WELLS EACH WITH ACCOMPANYING PUMPS AND PIPES. THIS DESIGN LETS HALF OF THE STATION BE SHUT DOWN WHEN REPAIRS ARE NEEDED.

AVAILABILITY: AMERICAN CITY & COUNTY, V97 N4

IRIS ACCESSION NUMBER: EW007678

PUBLICATION DATE: MAR 82

TITLE: EVALUATION OF ENVIRONMENTAL ASSESSMENT METHODS.

PERSONAL AUTHOR: NICHOLS, ROBERT; HYMAN, ERIC

DESCRIPTOR: *ANALYTICAL TECHNIQUES; DECISION MAKING; *ENVIRONMENTAL ASSESSMENT; ENVIRONMENTAL QUALITY; *EVALUATION; *MANAGEMENT; *PLANNING

DESCRIPTIVE NOTE: 87-105P.

ABSTRACT: TWELVE REPRESENTATIVE METHODS FOR ENVIRONMENTAL ASSESSMENT ARE DESCRIBED, EVALUATED, AND COMPARED IN TERMS OF THE FOLLOWING SEVEN EVALUATION CRITERIA: TREATMENT OF THE PROBABILISTIC NATURE OF ENVIRONMENTAL QUALITY, INCORPORATION OF INDIRECT AND FEEDBACK EFFECTS, DYNAMIC CHARACTERISTICS, MULTIPLE-OBJECTIVES APPROACH TO SOCIAL WELFARE, CLEAR SEPARATION OF FACTS AND VALUES, FACILITATION OF PARTICIPATION, AND EFFICIENCY IN RESOURCE AND TIME REQUIREMENTS.

AVAILABILITY: JOURNAL OF THE WATER RESOURCES PLANNING AND MANAGEMENT DIVISION, V108 N1

IRIS ACCESSION NUMBER: EW007679

PUBLICATION DATE: MAR 82

TITLE: WATER LAW PRIMER.

PERSONAL AUTHOR: COX, WILLIAM E.

DESCRIPTOR: GROUNDWATER; *LAWS; *LEGAL ASPECTS; *LEGISLATION; *MANAGEMENT; *REGULATIONS; *WATER QUALITY; *WATER RESOURCES; *WATERWAYS

DESCRIPTIVE NOTE: 107-122P.

ABSTRACT: AN OVERVIEW OF LEGAL PRINCIPLES CONTROLLING WATER RESOURCES USE AND DEVELOPMENT IS PROVIDED. THE BODY OF LEGAL PRINCIPLES IS A COMBINATION OF FEDERAL AND STATE LAW, WITH FEDERAL LAW GENERALLY HAVING A GREATER ROLE WITH RESPECT TO WATER QUALITY PROTECTION THAN WITH RESPECT TO ALLOCATION WHICH PRIMARILY HAS BEEN A STATE FUNCTION. THE BASIC PATTERN OF WATER LAW EVOLUTION IS GIVEN, WITH SEPARATE CONSIDERATION GIVEN TO WATERCOURSES, GROUND WATER, AND DIFFUSED SURFACE WATER. WITHIN EACH OF THESE AREAS, COMMON LAW DOCTRINES AND LEGISLATIVE DEVELOPMENTS ARE DISCUSSED. CURRENT WATER MANAGEMENT PROBLEMS AND DISSATISFACTIONS WITH WATER LAW

WHICH LIKELY WILL RESULT IN CONTINUING CHANGE ARE CONSIDERED.

AVAILABILITY: JOURNAL OF THE WATER RESOURCES PLANNING AND MANAGEMENT DIVISION, V108 N1

IRIS ACCESSION NUMBER: EW007680

PUBLICATION DATE: APR 82

TITLE: INVESTIGATIONS SUBCOMMITTEE RECOMMENDS REFORMS FOR CONSTRUCTION GRANTS PROGRAM.

PERSONAL AUTHOR: FELICIANO, D. V.

DESCRIPTOR: *CLEAN WATER ACT; *CONGRESS; *CONSTRUCTION GRANTS; COSTS; ENFORCEMENT; ENVIRONMENTAL PROTECTION AGENCY; *EVALUATION; *HEARINGS; *INVESTIGATIONS; LEGISLATION; PERFORMANCE EVALUATION; *PUBLIC WORKS; WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 323-327P.

ABSTRACT: THIS ARTICLE SUMMARIZES THE FINDINGS OF THE INVESTIGATIONS AND OVERSIGHT SUBCOMMITTEE OF THE HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION CONCERNING THE EXTENT TO WHICH THE PUBLIC INVESTMENT IN THE CONSTRUCTION GRANTS PROGRAM IS PRODUCING CLEAN WATER. THE SUBCOMMITTEE GAVE HIGH MARKS TO WASTEWATER TREATMENT BUT ALSO FOUND SERIOUS PERFORMANCE PROBLEMS REPRESENTING A WASTE OF PUBLIC DOLLARS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4

IRIS ACCESSION NUMBER: EW007681

PUBLICATION DATE: APR 82

TITLE: NEW DEFINITION OF SECONDARY TREATMENT CAUSES PRIMARY CONCERN.

PERSONAL AUTHOR: FLYNN, K. C.

DESCRIPTOR: *CONSTRUCTION GRANTS; EFFLUENTS; *ENVIRONMENTAL PROTECTION AGENCY; EQUIPMENT; *EVALUATION; *FACILITIES; POLLUTION CONTROL; *SECONDARY TREATMENT; *STANDARDS; TECHNOLOGY; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 328-330P.

ABSTRACT: PROMPTED BY A NEW LAW FOR CONSTRUCTION GRANTS (P.L. 97-117) AND A NEW EMPHASIS ON COST-EFFECTIVE WASTEWATER TREATMENT, USEPA IS NOW CONSIDERING A NEW AND LESS STRICT DEFINITION OF SECONDARY TREATMENT. THIS ARTICLE PRESENTS A NEW DEFINITION AND PROVIDES CRITERIA AND RATIONALE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4

IRIS ACCESSION NUMBER: EW007682

PUBLICATION DATE: APR 82

TITLE: PRESS RELATIONS FOR PUBLICLY OWNED TREATMENT WORKS.

PERSONAL AUTHOR: FORCE, JAMES M.; BERGER, THOMAS J.

DESCRIPTOR: COMMUNICATIONS; *COMMUNITY RELATIONS; *MANAGEMENT; *NEWS MEDIA; OPERATIONS (WASTEWATER); *PRESS RELATIONS; *PUBLIC RELATIONS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 331-334P.

ABSTRACT: THIS ARTICLE EXAMINES THE PUBLIC RELATIONS PROGRAM INITIATED BY THE MANAGEMENT OF A WAUSAU, WISCONSIN, WASTEWATER TREATMENT PLANT. SPECIAL REPORTS WERE PREPARED AND RELEASED WHEN THE TREATMENT PLANT UNDERTOOK REPAIRS AND OTHER POTENTIALLY DISRUPTIVE PROJECTS. IN ADDITION, NEWS REPORTERS WERE ENCOURAGED TO VISIT THE PLANT, LEARN ABOUT THE TREATMENT PROCESSES, AND DISCUSS OPERATIONAL PROBLEMS AND CHALLENGES WITH PLANT STAFF.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4

IRIS ACCESSION NUMBER: EW007683

PUBLICATION DATE: APR 82

TITLE: UPGRADING OPERATOR RESPONSIBILITIES FOR NEW FACILITIES.

PERSONAL AUTHOR: RICHARDSON, GARY R.; JAMESSON, GUY M.

DESCRIPTOR: COMMUNICATIONS; *FACILITIES; *JOB TRAINING; LABOR; *MANAGEMENT; *OPERATORS; *OPERATIONS (WASTEWATER); *PERSONNEL; *PLANNING; *TRAINING; UNIONS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 335-338P.

ABSTRACT: THE SANITATION DISTRICT NO. 1 OF CAMPBELL AND KENTON COUNTIES SUCCESSFULLY ADDRESSED SEVERAL LABOR MANAGEMENT RELATIONS PROBLEMS COINCIDENTAL WITH THE PHASE-OUT OF AN OLD PRIMARY WASTEWATER TREATMENT PLANT. MANAGEMENT HAS BEEN ABLE TO WORK WITH LABOR TO DEVELOP A PROFICIENT OPERATING STAFF DURING THE CHANGEOVER FROM THE OLD TO THE NEW PLANT. THE NEW JOB DESCRIPTIONS, CLASSROOM ORIENTATION, AND ON-THE-JOB TRAINING HAVE RESULTED IN CHANGES THAT REFLECT BOTH GOOD FISCAL MANAGEMENT AND OPERATING EFFICIENCY. AT THE SAME TIME, LABOR HAS BEEN KEPT INFORMED OF MANAGEMENT'S PLANS AND HAS PARTICIPATED EXTENSIVELY IN DEVELOPMENT OF THE APPROPRIATE CHANGES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4

IRIS ACCESSION NUMBER: EW007684

PUBLICATION DATE: APR 82

TITLE: IMPACT OF PRETREATMENT ON SLUDGE CONTENT OF HEAVY METALS.

PERSONAL AUTHOR: KOCH, CARL M.; AND OTHERS

DESCRIPTOR: *CADMIUM; *HEAVY METALS; *INDUSTRIAL WASTES; *LAND APPLICATION; MUNICIPAL WASTES; *PRETREATMENT; *SECONDARY TREATMENT; *SLUDGE; WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 339-343P.

ABSTRACT: THE CAMDEN COUNTY MUNICIPAL UTILITIES AUTHORITY (CCUMA) IS EXPANDING AND UPGRADING ITS WASTEWATER TREATMENT FACILITIES TO SECONDARY TREATMENT. THE CONCENTRATION OF HEAVY METALS IN THE MUNICIPAL SLUDGE IS CRITICAL IN DETERMINING THE ENVIRONMENTAL ACCEPTABILITY OF LAND-BASED SLUDGE DISPOSAL ALTERNATIVES AND IN ASSESSING SUITABLE LAND APPLICATION RATES. AN EXTENSIVE INDUSTRIAL SURVEY AND AN INDUSTRIAL AND STORMWATER SAMPLING PROGRAM WERE CONDUCTED FOR CADMIUM, CHROMIUM, COPPER, LEAD, MERCURY, NICKEL, AND ZINC. CADMIUM WAS THE ONLY METAL FOUND TO BE CONTRIBUTED PRIMARILY FROM INDUSTRIAL SOURCES, AND THEREFORE THE ONLY METAL THAT WOULD BE SIGNIFICANTLY REMOVED BY INDUSTRIAL PRETREATMENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4

IRIS ACCESSION NUMBER: EW007685

PUBLICATION DATE: APR 82

TITLE: FATE OF NITROGEN IN AEROBIC SLUDGE DIGESTION.

PERSONAL AUTHOR: MAVINIC, D. S.; KOERS, D. A.

DESCRIPTOR: *ACTIVATED SLUDGE; *AEROBIC DIGESTION; DESIGN; NITRIFICATION; *NITROGEN; *PERFORMANCE EVALUATION; *PROCESS DESIGN; *RESEARCH REPORTS; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 352-360P.

ABSTRACT: A STUDY WAS UNDERTAKEN TO DEVELOP LOW-TEMPERATURE, OPERATING, AND PERFORMANCE GUIDELINES FOR AEROBIC DIGESTION OF WASTE-ACTIVATED SLUDGE. IT WAS FOUND THAT THE ORGANIC NITROGEN PORTIONS OF THE MIXED LIQUOR ARE PRACTICALLY CONSTANT PER UNIT OF CELL MASS FOR ALL SYSTEMS AND SLUDGE AGES; THAT IS, 0.080 G N/G VSS. IN ADDITION, THE ABSENCE OF ORGANIC NITROGEN IN THE SUPERNATANTS INDICATED THAT VOLATILE SOLIDS DESTRUCTION DURING AEROBIC DIGESTION RESULTS IN ALMOST 100% MINERALIZATION OF ORGANIC NITROGEN TO FORM AMMONIA IN SOLUTION. CONSIDERABLE NITRIFICATION/DENITRIFICATION OCCURRED IN ALL SYSTEMS AND AT ALL TEMPERATURES, DESPITE PH VALUES AS LOW AS 4.0.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4

IRIS ACCESSION NUMBER: EW007686

PUBLICATION DATE: APR 82

TITLE: NOMOGRAPHS FOR RAPID SOLUTIONS FOR THE STREETER-PHELPS EQUATIONS.

PERSONAL AUTHOR: MCBRIDE, G. B.

DESCRIPTOR: *BOD; *DISSOLVED OXYGEN; *MATHEMATICAL MODELS; *MODELING; *NOMOGRAPHS; POLLUTION CONTROL; *RIVERS; *STREETER-PHELPS EQUATIONS; *WATER QUALITY

DESCRIPTIVE NOTE: 378-384P.

ABSTRACT: PUBLISHED SOLUTIONS TO THE STREETER-PHELPS MODEL EQUATIONS ALLOW CALCULATION OF THE CONCENTRATION OF RIVER BIOCHEMICAL OXYGEN DEMAND (BOD) AND DISSOLVED OXYGEN DEFICIT (DOD) DOWNSTREAM OF SOME INITIAL POINT AT WHICH THE RIVER BOD AND DOD ARE KNOWN. THE PAPER PRESENTS SOLUTIONS IN SIMPLE NOMOGRAPH FORM FOR THE LOCATION AND MAGNITUDE OF THE MAXIMUM DOWNSTREAM RIVER DOD. ALSO GIVEN IS A NOMOGRAPH FOR CALCULATING THE MAXIMUM PERMISSIBLE INITIAL RIVER BOD5, GIVEN THE INITIAL RIVER DOD AND THE MAXIMUM PERMISSIBLE DOWNSTREAM DOD. THESE NOMOGRAPHS MAKE POSSIBLE RAPID CALCULATIONS AND INVOLVE ONLY THE SIMPLEST COMPUTATIONS. THEY SHOULD BE PARTICULARLY USEFUL WHERE PREDICTIONS ARE REQUIRED QUICKLY, AS IN THE CASE OF AN EMERGENCY SPILLAGE OF OXYGEN-DEMANDING LIQUID. IT SHOULD BE NOTED THAT CALUCLATIONS WILL BE ONLY APPROXIMATE FOR RIVERS TO WHICH THE STREETER-PHELPS MODEL DOES NOT APPLY.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4

IRIS ACCESSION NUMBER: EW007691

PUBLICATION DATE: APR 79

TITLE: INSPECTORS GUIDE FOR EVALUATION OF MUNICIPAL WASTEWATER TREATMENT PLANTS.

PERSONAL AUTHOR: HINRICHS, DANIEL J.

DESCRIPTOR: CHECKLISTS; *EVALUATION; *FACILITIES; *GUIDELINES; *INSPECTION; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *MANAGEMENT; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; SAFETY; UNIT PROCESSES; *WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 360P. PRICE: $1.00 PLUS $.03 PER PAGE.

ABSTRACT: PRESENTED IS AN INSPECTOR'S GUIDE DESIGNED TO PROVIDE STATE AND EPA INSPECTORS WITH THE BACKGROUND NECESSARY TO EVALUATE THE OPERATION AND MAINTENANCE OF WASTEWATER TREATMENT PLANTS. THE GUIDE PROVIDES THE INFORMATION NECESSARY TO MAKE THE SUBJECTIVE JUDGEMENTS REQUIRED FOR PLANT EVALUATION AND INCLUDES CHECKLISTS FOR INDIVIDUAL UNIT PROCESSES, SUCH AS PUMPING STATIONS, SCREENING, GRIT REMOVAL, ACTIVATED SLUDGE, TRICKLING FILTERS AND LAGOONS. OVERALL PLANT MANAGEMENT, SAFETY, PLANT HYDRAULICS, AND THE COMPATIBILITY OF UNIT PROCESSES ARE

EMPHASIZED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007733

PUBLICATION DATE: AUG 80

TITLE: CHANGING 150-LB CHLORINE SUPPLIES - STUDENT WORKBOOK, INSTRUCTOR GUIDE, PRE-TEST AND POST-TEST.

DESCRIPTOR: *AUDIOVISUAL AIDS; *CHLORINATION; *DISINFECTION; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); *POST SECONDARY EDUCATION; TRAINING; *WASTEWATER TREATMENT; WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 20P. PRICE: $1.00 PLUS $.03 PER PAGE.

ABSTRACT: PRESENTED ARE THE PRINT MATERIALS FOR AN INSTRUCTIONAL UNIT ON GAS CHLORINATION, 150 LB CYLINDERS. THIS UNIT EMPHASIZES CHANGING A 150-LB CHLORINE SUPPLY SAFELY AND WITHOUT LEAKS IN LESS THAN ONE HOUR. INCLUDED IN THE MATERIALS ARE AN INSTRUCTOR GUIDE, STUDENT WORKBOOK, AND PRE-TEST AND POST-TESTS. AN INSTRUCTIONAL APPROACH IS SPECIFIED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007734

PUBLICATION DATE: SEP 73

TITLE: RETURN SLUDGE FLOW CONTROL.

PERSONAL AUTHOR: WEST, ALFRED W.

DESCRIPTOR: *ACTIVATED SLUDGE; *CLARIFIERS; *FACILITIES; *INSTRUCTIONAL MATERIALS; INSTRUMENTATION; LABORATORY TRAINING; *MEASUREMENT TECHNIQUES; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PROCESS CONTROL; WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 14P. PRICE: $1.50

ABSTRACT: DISCUSSED ARE CLARIFIER SLUDGE FLOW CONTROL PROCEDURES FOR THE ACTIVATED SLUDGE PROCESS. EMPHASIS IS PLACED ON THE USE OF BASIC DATA TO CALCULATE THE CLARIFIER SLUDGE FLOW RATE NEEDED TO MAINTAIN OR RESTORE PROCESS EQUILIBRIUM.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007735

TITLE: ACTIVATED SLUDGE QUALITY AND PROCESS BALANCE.

PERSONAL AUTHOR: WEST, ALFRED W.

DESCRIPTOR: *ACTIVATED SLUDGE; FACILITIES; *INSTRUCTIONAL MATERIALS; LABORATORY TRAINING; *MEASUREMENT TECHNIQUES; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PROCESS CONTROL; *SLUDGE; WASTE DISPOSAL; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 33P. PRICE: $1.00 PLUS $.03 PER PAGE.

ABSTRACT: DISCUSSED ARE TWO CONCEPTS ASSOCIATED WITH THE OPERATIONAL CONTROL PROCEDURES FOR THE ACTIVATED SLUDGE PROCESS. USING STANDARD ROUTINE CONTROL TEST INFORMATION, THIS PAPER DETAILS THE PREPARATION OF A TREND CHART DISPLAYING DYNAMIC SLUDGE AGE (DSA) VALUES AND ALSO ILLUSTRATES THE CALCULATION OF THE FINAL CLARIFIER SLUDGE BLANKET THICKNESS (BLT) VERSUS CLARIFIER SLUDGE FLOW PERCENTAGE CURVES. GUIDELINES FOR USING THIS INFORMATION TO DETERMINE THE PROPER SLUDGE WASTING AND RETURN SLUDGE FLOW RATES NEEDED TO MEET THE INTERRELATED REQUIREMENTS OF THE VARIABLE SEWAGE FLOWS, ORGANIC LOADINGS, AND SLUDGE QUALITY CHARACTERISTICS ARE PRESENTED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007738

PUBLICATION DATE: DEC 77

TITLE: INSTRUCTOR'S GUIDE FOR WATER QUALITY MANAGEMENT WORKSHOP.

DESCRIPTOR: *AUDIOVISUAL AIDS; CERTIFICATION; CONSTRUCTION GRANTS; *CURRICULUM DEVELOPMENT; FACILITIES; *FEDERAL LEGISLATION; INDUSTRY; *INSTRUCTIONAL MATERIALS; *MANPOWER DEVELOPMENT; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); PLANNING; *POST SECONDARY EDUCATION; TRAINING; *WASTEWATER TREATMENT; WATER QUALITY; *WORKSHOPS

DESCRIPTIVE NOTE: 287P.

ABSTRACT: PRESENTED IS THE INSTRUCTOR'S GUIDE FOR A VIDEO TAPED WATER QUALITY MANAGEMENT WORKSHOP DESIGNED TO ASSIST USEPA REGIONAL PERSONNEL IN DEVELOPING WATER QUALITY WORKSHOPS WITHIN THE REGIONS. THE MATERIAL IS CONSISTENT WITH CONTROL ACT OF 1972 (PL 92-500) BUT HAS NOT BEEN MODIFIED TO BE CONSISTENT WITH THE NEW REQUIREMENTS OF THE CLEAN WATER ACT OF 1977 (PL 95-217). TOPICS DISCUSSED INCLUDE STATE AND AREAWIDE WATER QUALITY MANAGEMENT PROGRAMS, MUNICIPAL CONSTRUCTION GRANTS, O & M OF TREATMENT FACILITIES, NON-POINT SOURCE CONTROLS, INDUSTRIAL EFFLUENT LIMITATIONS, PRETREATMENT, NPDES PERMITS AND ENFORCEMENT, MANPOWER PLANNING AND TRAINING, AND OPERATOR CERTIFICATION.

AVAILABILITY: U. S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007740

PUBLICATION DATE: 77

TITLE: WATER CONSERVATION DEVICES: RESIDENTIAL WATER CONSERVATION - WATER RESEARCH CAPSULE REPORT.

DESCRIPTOR: *APPLIANCES; *CONSERVATION; COST EFFECTIVENESS; *COSTS; ECONOMIC FACTORS *EQUIPMENT; *PERFORMANCE EVALUATION; *PLUMBING EQUIPMENT; *RESEARCH REPORTS; *RESIDENTIAL USE; *WATER CONSERVATION; *WATER USE

DESCRIPTIVE NOTE: 9P. STOCK NO. 024-000-0837-1

ABSTRACT: THIS REPORT HIGHLIGHTS FINDINGS OF RESEARCH PROJECTS INVOLVING EVALUATION OF RESIDENTIAL WATER CONSERVATION DEVICES. AMONG THE DEVICES EXAMINED ARE: TOILET INSERTS, IMPROVED BALLCOCKS, DUAL FLUSH CYCLE MODIFICATIONS, WATER SAVING TOILETS, FAUCET AERATORS, SPRAY TAPS, FLOW CONTROL DEVICES, PRESSURE REDUCING VALVES, WATER CONSERVING APPLIANCES, LANDSCAPE IRRIGATION EQUIPMENT, AND OTHER WATER CONSERVATION INNOVATIONS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007741

PUBLICATION DATE: 77

TITLE: SCALE-FREE-VAPOR-COMPRESSION EVAPORATION - WATER RESEARCH CAPSULE REPORT.

DESCRIPTOR: *DESIGN; ECONOMIC FACTORS; *EQUIPMENT; *FACILITIES; *INDUSTRIAL WASTES; *PERFORMANCE EVALUATION; *PILOT PLANTS; *RESEARCH REPORTS; *TECHNOLOGICAL ADVANCEMENTS; *VAPOR-COMPRESSION EVAPORATOR; *WASTEWATER CONCENTRATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 9P. STOCK NO. 024-000-00839-8

ABSTRACT: THIS REPORT DESCRIBES THE DEVELOPMENT AND APPLICATIONS OF A TUBE-IN-SHELL, VAPOR-COMPRESSION EVAPORATOR (BRINE CONCENTRATOR) USING A SEED-SLURRY PROCESS FOR SCALE CONTROL. PILOT STUDIES SHOW THIS TECHNOLOGY TO BE A LOW-ENERGY, HIGH-RECOVERY MEANS OF CONCENTRATING WASTEWATERS. INFORMATION IS PRESENTED ON CONFIGURATION DEVELOPMENT, ECONOMICS, CURRENT APPLICATIONS, AND POTENTIAL APPLICATIONS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007742

PUBLICATION DATE: 79

TITLE: REVERSE OSMOSIS - WATER RESEARCH CAPSULE REPORT.

DESCRIPTOR: *ECONOMIC FACTORS; *PERFORMANCE EVALUATION; PURIFICATION; *RESEARCH REPORTS; *REVERSE OSMOSIS; *TECHNOLOGICAL ADVANCEMENTS; TECHNOLOGY; WASTEWATER TREATMENT; *WATER RESOURCES; *WATER REUSE; WATER TREATMENT

DESCRIPTIVE NOTE: 20P. STOCK NUMBER 024-000-00855-0

ABSTRACT: THIS REPORT EXAMINES THE USE OF REVERSE OSMOSIS AS A TECHNOLOGY TO PURIFY SUBSTANDARD OR POLLUTED WATER ECONOMICALLY AND TO ALLOW MULTIPLE REUSE OF ALL AVAILABLE WATER. ATTENTION IS FOCUSED ON THE SIGNIFICANCE OF REVERSE OSMOSIS, A DESCRIPTION OF THE TECHNOLOGY, ECONOMIC AND POWER DEMANDS, PERFORMANCE EVALUATION, AREAS OF APPLICATION, AND FUTURE DEVELOPMENTAL EFFORTS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007743

PUBLICATION DATE: 79

TITLE: CONSERVATION OF WATER, CHEMICALS, AND ENERGY IN DYEING NYLON CARPET - WATER RESEARCH CAPSULE REPORT.

DESCRIPTOR: *CHEMICALS; *CARPET MANUFACTURING; DYEING; *ENERGY CONSERVATION; *INDUSTRY; *RECYCLING; *RESEARCH REPORTS; *TEXTILE INDUSTRY; *WATER CONSERVATION; *WATER RESOURCES; *WATER USE

DESCRIPTIVE NOTE: 11P. STOCK NUMBER 024-000-00852-5

ABSTRACT: THIS REPORT DEMONSTRATES HOW TEXTILE MANUFACTURING CAN REDUCE ITS WATER CONSUMPTION BY PROCESS MODIFICATION AND AT THE SAME TIME SUBSTANTIALLY REDUCE ITS ENERGY USE AND CHEMICAL REQUIREMENTS. THE REPORT FOCUSES ON THE DYEING OF CARPETS AND EXAMINES THE PROCESS MODIFICATIONS IN DETAIL AND DISCUSSES ITS ADVANTAGES AND APPLICATIONS IN OTHER AREAS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007744

PUBLICATION DATE: 79

TITLE: ELECTRODIALYSIS TECHNOLOGY - WATER RESEARCH CAPSULE REPORT.

DESCRIPTOR: DISTILLATION; *DRINKING WATER; ECONOMIC FACTORS; *ELECTRODIALYSIS; *EQUIPMENT; PERFORMANCE EVALUATION; *PURIFICATION; *RESEARCH REPORTS; *SALINE WATER; *TECHNOLOGICAL ADVANCEMENTS; TECHNOLOGY; *WATER QUALITY; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 15P. STOCK NUMBER 024-000-00854-1

ABSTRACT: THIS REPORT EXAMINES ELECTRODIALYSIS, AN ION TRANSFER MEMBRANE SEPARATION TECHNIQUE FOR PROVIDING PURE DRINKING OR INDUSTRIAL PROCESS WATER FROM SALINE SUPPLIES.

INFORMATION IS PROVIDED FOR THIS NEW TECHNOLOGY'S SIGNIFICANCE, PROCESS, PERFORMANCE, ECONOMICS, AND PRACTICAL APPLICATIONS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007745

PUBLICATION DATE: 78

TITLE: WATER FACTORY 21 - WATER RESEARCH CAPSULE REPORT.

DESCRIPTOR: *CALIFORNIA; *DESIGN; *ECONOMIC FACTORS; *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RECLAMATION; *RESEARCH REPORTS; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER TREATMENT; WATER RESOURCES; *WATER REUSE

DESCRIPTIVE NOTE: 19P. STOCK NO. 024-000-00851-7

ABSTRACT: THIS REPORT HIGHLIGHTS A WATER TREATMENT FACILITY OF THE ORANGE COUNTY WATER DISTRICT, WHICH INTEGRATES THE MOST ADVANCED FULL-SCALE TREATMENT TECHNOLOGY CURRENTLY AVAILABLE INTO THE WORLD'S LARGEST WATER RECLAMATION SYSTEM. DETAILED DESCRIPTIONS ARE PROVIDED FOR THE FACILITY'S DESIGN, EQUIPMENT, PROCESS PERFORMANCE, AND ECONOMIC FACTORS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW007746

PUBLICATION DATE: NOV 76

TITLE: THE COST OF LAND APPLICATION OF WASTEWATER: A SIMULATION ANALYSIS.

PERSONAL AUTHOR: YOUNG, C. EDWIN

DESCRIPTOR: *AGRICULTURE; *COMPUTER APPLICATIONS; *COST EFFECTIVENESS; *COSTS; *ECONOMIC FACTORS; *LAND APPLICATION; *LAND TREATMENT; *MUNICIPAL WASTES; PUBLIC HEALTH; *SEWAGE; *SIMULATIONS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 59P.

ABSTRACT: LAND TREATMENT OF WASTEWATER IS A COST EFFECTIVE METHOD FOR ADVANCED TREATMENT OF MUNICIPAL SEWAGE. COSTS OF LAND TREATMENT OF WASTEWATER ARE ANALYZED USING A COMPUTER SIMULATION MODEL. SIX ALTERNATIVE TECHNIQUES FOR LAND APPLICATION ARE EXAMINED. VARIATIONS IN COSTS ARE STUDIED USING COST ESTIMATES AND COST ELASTICITY ESTIMATES. ASSUMING THAT THE SOIL REQUIREMENTS ARE MET, INFILTRATION BASINS ARE THE LEAST COST TECHNIQUE FOR LAND APPLICATION. CENTER PIVOT IRRIGATION IS THE LEAST COST IRRIGATION ALTERNATIVE EXAMINED. ANALYSIS OF TREATMENT ECONOMIES OF SIZE INDICATES THAT MOST OF THE ADVANTAGES TO INCREASING FACILITY SIZE HAVE BEEN REALIZED AFTER FACILITY SIZE REACHES 10 MILLION GALLONS PER DAY.

AVAILABILITY: UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE ECONOMICS DIVISION, WASHINGTON, DC 20250

IRIS ACCESSION NUMBER: EW007747

PUBLICATION DATE: SEP 78

TITLE: LAND APPLICATION OF WASTEWATER: A COST ANALYSIS.

PERSONAL AUTHOR: YOUNG, C. EDWIN

DESCRIPTOR: *AGRICULTURE; COMPUTER APPLICATIONS; *COST EFFECTIVENESS; *COSTS; *ECONOMIC FACTORS; *LAND APPLICATION; *LAND TREATMENT; *MUNICIPAL WASTES; PUBLIC HEALTH; *SEWAGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 25P.

ABSTRACT: THIS REPORT LOOKS AT THE ECONIMIC FACTORS CONCERNING LAND APPLICATION OF WASTEWATER. IT STATES THAT THIS TECHNIQUE IS A COST EFFECTIVE METHOD FOR ADVANCED WASTEWATER TREATMENT. OTHER FACTORS ANALYZED INCLUDE LAND COSTS, EFFLUENT TRANSMISSION, PUBLIC HEALTH CONSTRAINTS, STORAGE, AND THE APPLICATION RATE.

AVAILABILITY: UNITED STATES DEPARTMENT OF AGRICULTURE, WASHINGTON, DC 20250

IRIS ACCESSION NUMBER: EW007748

PUBLICATION DATE: FEB 81

TITLE: MEETING ENVIRONMENTAL WORKFORCE NEEDS: DETERMINING EDUCATION AND TRAINING REQUIREMENTS. PROCEEDINGS OF THE NATIONAL CONFERENCE ON MEETING ENVIRONMENTAL WORKFORCE NEEDS (WASHINGTON, DC, FEBRUARY 1981).

DESCRIPTOR: CONFERENCES; *EDUCATION WORK RELATIONSHIP; ELEMENTARY SECONDARY EDUCATION; *EMPLOYMENT OPPORTUNITIES; EMPLOYMENT PATTERNS; ENVIRONMENT; *ENVIRONMENTAL EDUCATION; ENVIRONMENTAL TECHNICIANS; JOB TRAINING; LABOR FORCE; *LABOR FORCE DEVELOPMENT; *NATURAL RESOURCES; *POLLUTION; POST SECONDARY EDUCATION; TECHNICAL EDUCATION

DESCRIPTIVE NOTE: PRICE: 020.00; DISCOUNTS ON QUANTITY ORDERS; NOT AVAILABLE IN PAPER COPY DUE TO COPYRIGHT RESTRICTIONS.

ABSTRACT: PARTICIPANTS AT THE NATIONAL CONFERENCE ON MEETING ENVIRONMENTAL WORKFORCE NEEDS MET IN RESPONSE TO A GROWING CONCERN ABOUT THE FUTURE AVAILABILITY OF A TRAINED WORKFORCE CAPABLE OF DEALING WITH PRESENT AND FUTURE ENVIRONMENTAL PROBLEMS. THIRTY-NINE PAPERS PRESENTED AT THIS CONFERENCE ARE INCLUDED WHICH ADDRESS THE FOLLOWING ISSUES: FUTURE JOB OPPORTUNITIES; PROGRAMS AND CURRICULA FOR OCCUPATIONAL TRAINING; ABILITY OF EDUCATIONAL INSTITUTIONS TO MEET ANTICIPATED NEEDS; GUIDANCE AND COUNSELING; JOBS FOR MINORITIES; CONNECTIONS BETWEEN EDUCATORS AND INDUSTRY,

GOVERNMENT AND LABOR; WORKFORCE PLANNING FOR STATE ENVIRONMENTAL AGENCIES; AND CO-OP PROGRAMS TO MEET STATE AND LOCAL SHORTAGES.

AVAILABILITY: INFORMATION DYNAMICS, INC., 111 CLAYBROOK DR., SILVER SPRING, MD 20902

IRIS ACCESSION NUMBER: EW007749

PUBLICATION DATE: 79

TITLE: HAZARDOUS CHEMICALS: A MANUAL FOR SCHOOLS AND COLLEGES.

DESCRIPTOR: *CHEMISTRY; ELEMENTARY SCHOOL SCIENCE; ELEMENTARY SECONDARY EDUCATION; FIRST AID; *GUIDELINES; *LABORATORY SAFETY; *RESOURCE MATERIALS; *SAFETY; SCIENCE EDUCATION; *SCIENCE LABORATORIES; SECONDARY SCHOOL SCIENCE

DESCRIPTIVE NOTE: 240P.

ABSTRACT: COMPILED AS AN IMMEDIATE SOURCE OF REFERENCE AND GUIDANCE, THIS MANUAL WAS PUBLISHED BY THE SCOTTISH SCHOOLS SCIENCE EQUIPMENT RESEARCH CENTRE TO PROVIDE THE FOLLOWING INFORMATION ABOUT ALPHABETICALLY LISTED CHEMICALS CONSIDERED TO BE HAZARDOUS: (1) THE HAZARDS; (2) INCOMPATIBILITY WITH OTHER AGENTS; (3) METHODS FOR HANDLING, STORAGE, DISPOSAL AND SPILLAGE; AND (4) FIRST AID TECHNIQUES FOR EYES, LUNGS, MOUTH, AND SKIN. AN INTRODUCTION DESCRIBES GENERAL SAFETY RULES FOR THE USE OF CHEMICALS IN SCHOOL LABORATORIES.

AVAILABILITY: LONGMAN INC., 19 W. 44TH ST., NEW YORK, NY 10036

IRIS ACCESSION NUMBER: EW007750

PUBLICATION DATE: 80

TITLE: BASIC LABORATORY SKILLS FOR WATER AND WASTEWATER ANALYSIS. REPORT NO. 125.

PERSONAL AUTHOR: CLARK, DOUGLAS W.

DESCRIPTOR: *CHEMISTRY; COLLEGE SCIENCE; *ENVIRONMENTAL EDUCATION; ENVIRONMENTAL TECHNICIANS; HIGHER EDUCATION; JOB SKILLS; *LABORATORY EQUIPMENT; *LABORATORY PROCEDURES; *LABORATORY SAFETY; POST SECONDARY EDUCATION; SCIENCE EDUCATION; SECONDARY EDUCATION; SECONDARY SCHOOL SCIENCE; SKILL DEVELOPMENT; TECHNICAL EDUCATION; WASTE DISPOSAL; *WATER RESOURCES; WASTEWATER; WATER ANALYSIS

DESCRIPTIVE NOTE: 72P. PRICE: FREE.

ABSTRACT: DESIGNED FOR INDIVIDUALS WANTING TO ACQUIRE AN INTRODUCTORY KNOWLEDGE OF BASIC SKILLS NECESSARY TO FUNCTION IN A WATER OR WASTEWATER LABORATORY, THIS HANDBOOK EMPHASIZES CURRENT USE OF ROUTINE EQUIPMENT AND PROPER PROCEDURES. EXPLANATIONS AND ILLUSTRATIONS FOCUS ON UNDERLYING TECHNIQUES AND PRINCIPLES RATHER THAN PROCESSES FOR CONDUCTING SPECIFIC TESTS. CHAPTER ONE DISCUSSES THE PURPOSE, PROCEDURES, AND POTENTIAL PROBLEMS OF TEN BASIC LABORATORY TECHNIQUES AND EQUIPMENT. THE NEXT THREE CHAPTERS FOCUS ON MEASURING WEIGHTS AND VOLUMES, AND MISCELLANEOUS MEASUREMENTS INCLUDING TEMPERATURE, ELECTRICAL PROPERTIES, AND PH. FINAL CHAPTERS DEAL WITH SAFETY, RECORD KEEPING, AND PRINCIPLES OF LABORATORY ANALYSIS. WHILE INTENDED FOR WATER OR WASTEWATER LABORATORY PERSONNEL, MUCH OF THE INFORMATION IS APPLICABLE TO OTHER LABORATORY SETTINGS.

AVAILABILITY: NEW MEXICO WATER RESOURCES RESEARCH INSTITUTE, CAMPUS BOX 3167, NEW MEXICO STATE UNIVERSITY, LAS CRUCES, NM 88003

IRIS ACCESSION NUMBER: EW007751

PUBLICATION DATE: AUG 79

TITLE: INSTRUCTOR TRAINING SEMINARS: A MANUAL FOR STATE TRAINING SUPERVISORS.

DESCRIPTOR: *INSERVICE EDUCATION; LESSON PLANS; OBJECTIVES; PLANNING; *POST SECONDARY EDUCATION; *SEMINARS; *TRAINERS; *TRAINING; *WATER RESOURCES; DRINKING WATER; *WATER SUPPLY; WATER TREATMENT

DESCRIPTIVE NOTE: 336P. EDRS PRICE: MF01/PC14 PLUS POSTAGE

ABSTRACT: THIS MANUAL IS DESIGNED TO HELP STATE AND REGIONAL WATER SUPPLY TRAINING PERSONNEL CONDUCT SEMINARS FOR INSTRUCTORS OF WATER PLANT OPERATORS. THE PURPOSE IS TO HELP STATE SUPERVISORS UPGRADE THE QUALITY OF TRAINING GIVEN TO THE PLANT OPERATORS BY THEIR INSTRUCTORS. SINCE A SURVEY INDICATED THAT OPERATOR TRAINING INSTRUCTORS ARE TECHNICALLY COMPETENT, THE FOCUS IS ON TRAINING RATHER THAN CONTENT OR OPERATING SKILLS. SECTION I OUTLINES THE PROCEDURES INVOLVED IN PLANNING A SEMINAR FOR OPERATOR TRAINING INSTRUCTORS, DESCRIBES THE TASK OF AN INSTRUCTOR, AND PROVIDES AN OVERVIEW OF THE SEMINAR, FORMS AND QUESTIONNAIRES, AND AGENDAS. SECTION II CONTAINS 13 COMPLETE LESSON PLANS, EACH OF WHICH HAS THREE PARTS, LESSON PLAN COVER SHEETS, AND INSTRUCTIONAL MATERIALS. EIGHT OF THE LESSONS ADDRESS THE DEVELOPMENT AND PREPARATION OF A GOOD TRAINING PROGRAM INCLUDING CONTENT, OBJECTIVES, METHODS, AND PREPARING LESSON PLANS. FIVE LESSONS FOCUS ON CLASSROOM DELIVERY TECHNIQUES SUCH AS GROUP DISCUSSION AND DEMONSTRATION. (ED 209 074)

AVAILABILITY: ERIC DOCUMENT REPRODUCTION SERVICE, P.O. BOX 190 ARLINGTON, VA 22210

IRIS ACCESSION NUMBER: EW007752

PUBLICATION DATE: 81

TITLE: WORKING FOR CLEAN WATER, 1: CITIZEN HANDBOOKS. AN INFORMATION PROGRAM FOR ADVISORY GROUPS.

PERSONAL AUTHOR: STOLTZFUS, LORNA CHR., ED.

DESCRIPTOR: *ADVISORY COMMITTEES; *CITIZEN PARTICIPATION;

CITIZEN ROLE; *FACILITIES; MUNICIPALITIES; *PLANNING; *POST SECONDARY EDUCATION; *WATER POLLUTION; WATER RESOURCES; CLEAN WATER; CONSTRUCTION GRANTS; WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 111P. PRICE: $6.00

ABSTRACT: PRESENTED IS MATERIAL FROM AN INFORMATION PROGRAM DESIGNED TO HELP CITIZEN ADVISORY GROUPS AND LOCAL OFFICIALS IMPROVE DECISION-MAKING IN WATER QUALITY PLANNING. THIS PROGRAM IS AIMED AT HELPING PEOPLE FOCUS ON ESSENTIAL ISSUES AND QUESTIONS BY PROVIDING MATERIALS SUITABLE FOR PERSONS WITH NON-TECHNICAL BACKGROUNDS. THE FOLLOWING CHAPTERS ARE INCLUDED: (1) ROLE OF ADVISORY GROUPS; (2) PUBLIC PARTICIPATION; (3) FACILITY PLANNING IN THE CONSTRUCTION GRANTS PROGRAM; (4) MUNICIPAL WASTEWATER PROCESSES, AN OVERVIEW; (5) MUNICIPAL WASTEWATER PROCESSES, DETAIL; AND (6) SMALL SYSTEMS. THE VOLUME CONTAINS READING MATERIAL AND SELECTED REFERENCES.

AVAILABILITY: INFORMATION REFERENCE CENTER (ERIC/IRC), THE OHIO STATE UNIVERSITY, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007753

PUBLICATION DATE: 81

TITLE: WORKING FOR CLEAN WATER, 2: CITIZEN HANDBOOKS. AN INFORMATION PROGRAM FOR ADVISORY GROUPS.

PERSONAL AUTHOR: STOLTZFUS, LORNA CHR., ED.

DESCRIPTOR: *ADVISORY COMMITTEES; *CITIZEN PARTICIPATION; CONSERVATION (CONCEPT); ECONOMICS; *PLANNING; *POST SECONDARY EDUCATION; *WATER POLLUTION; WATER RESOURCES EDUCATION; *WATER POLLUTION; WATER RESOURCES; LAND TREATMENT; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 105P. PRICE: $6.00

ABSTRACT: PRESENTED IS MATERIAL FROM AN INFORMATION PROGRAM DESIGNED TO HELP CITIZEN ADVISORY GROUPS AND LOCAL OFFICIALS IMPROVE DECISION-MAKING IN WATER QUALITY PLANNING. THIS PROGRAM IS AIMED AT HELPING PEOPLE FOCUS ON ESSENTIAL ISSUES AND QUESTIONS BY PROVIDING MATERIALS SUITABLE FOR PERSONS WITH NON-TECHNICAL BACKGROUNDS. THE FOLLOWING CHAPTERS ARE INCLUDED: (1) INNOVATIVE AND ALTERNATE TECHNOLOGIES; (2) WATER CONSERVATION AND REUSE; (3) LAND TREATMENT; (4) COST-EFFECTIVENESS ANALYSIS; (5) ENVIRONMENTAL ASSESSMENT; AND (6) FINANCIAL MANAGEMENT. THE VOLUME CONTAINS READING MATERIAL AND SELECTED REFERENCES.

AVAILABILITY: INFORMATION REFERENCE CENTER (ERIC/IRC), THE OHIO STATE UNIVERSITY, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007754

PUBLICATION DATE: 81

TITLE: WORKING FOR CLEAN WATER, 3: CITIZEN HANDBOOKS. AN INFORMATION PROGRAM FOR ADVISORY GROUPS.

PERSONAL AUTHOR: STOLTZFUS, LORNA CHR., ED.

DESCRIPTOR: ADVISORY COMMITTEES; *CITIZEN PARTICIPATION; CONSERVATION (CONCEPT); *WATER POLLUTION; WATER RESOURCES; GROUNDWATER; *NONPOINT SOURCE POLLUTION; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 92P. PRICE: $6.00

ABSTRACT: PRESENTED IS MATERIAL FROM AN INFORMATION PROGRAM DESIGNED TO HELP CITIZEN ADVISORY GROUPS AND LOCAL OFFICIALS IMPROVE DECISION-MAKING IN WATER QUALITY PLANNING. THE PROGRAM IS DESIGNED TO HELP PEOPLE FOCUS ON ESSENTIAL ISSUES AND QUESTIONS BY PROVIDING MATERIALS SUITABLE FOR PEOPLE WITH NON-TECHNICAL BACKGROUNDS. CHAPTER TOPICS INCLUDE: (1) MULTIPLE USE; (2) INDUSTRIAL PRETREATMENT; (3) WASTEWATER FACILITIES OPERATIONS AND MANAGEMENT; (4) URBAN STORMWATER RUNOFF; (5) NONPOINT SOURCE POLLUTION - AGRICULTURE, FORESTRY, AND MINING; AND (6) GROUNDWATER CONTAMINATION. THE VOLUME INCLUDES READING MATERIALS AND SELECTED REFERENCES.

AVAILABILITY: INFORMATION REFERENCE CENTER (ERIC/IRC), THE OHIO STATE UNIVERSITY, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007782

PUBLICATION DATE: FEB 82

TITLE: SLUDGE HANDLING AND CONDITIONING - OPERATIONS MANUAL.

DESCRIPTOR: *EQUIPMENT; *FACILITIES; *INSTRUCTIONAL MATERIALS; *MANUALS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *PROCESS CONTROL; *POST SECONDARY EDUCATION; *SLUDGE; *SLUDGE TREATMENT; SOLID WASTES; UNIT PROCESSES; WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 253P. PRICE: $1.00 PLUS $.03 PER PAGE.

ABSTRACT: DESIGNED AS AN OPERATION AND MAINTENANCE GUIDE OR REFERENCE MANUAL FOR USE BY OPERATING PERSONNEL, THIS DOCUMENT PROVIDES THE GUIDANCE TO OPERATE AND MAINTAIN VARIOUS SLUDGE PROCESSING, CONDITIONING, AND DISPOSAL SYSTEMS AT WASTEWATER TREATMENT PLANTS. EMPHASIS IS PLACED ON THE ESTABLISHMENT OF GOOD OPERATIONAL PROCEDURES, TESTING, AND EFFECTIVE MEASURES AND PROCEDURES FOR DETECTION AND CORRECTION OF OPERATIONAL PROBLEMS. THE PROCESSING AND DISPOSAL SYSTEMS PRESENTED INCLUDE THOSE DESIGNED TO TREAT THE VARIOUS TYPES OF SLUDGE GENERATED FROM PRIMARY, SECONDARY, AND CHEMICAL WASTEWATER TREATMENT PROCESSES. INCLUDED ARE ALL OF THE PRINCIPLE SLUDGE UNIT PROCESSES AND UNIT OPERATIONS SUCH AS SLUDGE THICKENING, STABILIZATION AND CONDITIONING, CHEMICAL AND HEAT DEWATERING, HEAT DRYING, AND ULTIMATE DISPOSAL SYSTEMS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007792

PUBLICATION DATE: MAY 82

TITLE: MUNICIPAL POLLUTION ABATEMENT REPORT CARD: SIGNIFICANT PROGRESS.

PERSONAL AUTHOR: CHAMBLEE, JAMES A.

DESCRIPTOR: *COMPARATIVE ANALYSIS; *CONSTRUCTION GRANTS; *COSTS; *EPA; *FACILITIES; *MUNICIPALITIES; *PERFORMANCE EVALUATION; *POLLUTION CONTROL; PROGRAM DESCRIPTIONS; STATUS REPORTS; *SURVEYS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 422-427P.

ABSTRACT: THIS ARTICLE PRESENTS THE RESULTS OF A COMPARATIVE ANALYSIS OF THE NEEDS SURVEYS CONDUCTED IN 1973, 1976 AND 1980. IT ALSO CHARTS MUNICIPAL POLLUTION ABATEMENT PROGRESS DURING THAT PERIOD AND PROJECTS THE LEVEL OF MUNICIPAL WATER POLLUTION ABATEMENT IN 1985, THE LAST YEAR OF THE CURRENT AUTHORIZING PEROIOD FOR THE EPA CONSTRUCTION GRANTS PROGRAM.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N5

IRIS ACCESSION NUMBER: EW007793

PUBLICATION DATE: MAY 82

TITLE: CHEMOMETRIC MODELING OF WASTEWATER TREATMENT PROCESSES.

PERSONAL AUTHOR: SCHUETZLE, DENNIS; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BACTERIA; *BOD; *CHEMOMETRIC TECHNIQUES; *MATHEMATICAL MODELS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PROCESS DESCRIPTION; *RESEARCH REPORTS; *STATISTICAL ANALYSIS; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 457-465P.

ABSTRACT: CHEMOMETRIC TECHNIQUES USING A SYSTEM OF CLUSTERING ANALYSIS (PATTERN RECOGNITION) AND MULTIVARIANT DATA ANALYSIS HAVE BEEN USED TO MODEL AN EXPERIMENTAL WASTEWATER TREATMENT PROCESS CONSISTING OF A PRIMARY TREATMENT PROCESS AND TWO LAGOONS MODIFIED TO SIMULATE A CRUDE SECONDARY TREATMENT FACILITY. BOTH GRAPHICAL AND MATHEMATICAL MODELS WERE USED TO DESCRIBE THE WASTEWATER TREATMENT SYSTEM, AND TO DETERMINE WHAT CHEMICAL PARAMETERS SHOULD BE MAINTAINED TO OPTIMIZE BOD5 REDUCTION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N5

IRIS ACCESSION NUMBER: EW007794

PUBLICATION DATE: MAY 82

TITLE: ORGANIC COMPOSITION OF AEROBIC, ANAEROBIC, AND COMPOST-STABILIZED SLUDGES.

PERSONAL AUTHOR: HIGGINS, A. J.; AND OTHERS

DESCRIPTOR: *AEROBIC PROCESSES; *ANAEROBIC PROCESSES; *ANAEROBIC DIGESTION; *COMPOSTING; *OPERATIONS (WASTEWATER); ORGANIC COMPOUNDS; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 466-473P.

ABSTRACT: THE ORGANIC COMPOSITION OF WASTEWATER SLUDGES TREATED BY AEROBIC, ANAEROBIC, AND COMPOST STABILIZATION WAS STUDIED TO DETERMINE THE TYPE AND QUANTITY OF ORGANIC MATTER DEGRADED BY THE VARIOUS PROCESSES. THREE PILOT-SCALE PROCESSES WERE DESIGNED AND OPERATED UNDER ACTUAL, FULL-SCALE CONDITIONS. THE ANALYSIS OF THE WASTEWATER SLUDGE SAMPLES INDICATED THAT COMPOST STABILIZATION WAS THE MOST EFFECTIVE PROCESS IN DEGRADING THE ORGANIC CONSTITUENTS STUDIED. ANAEROBIC DIGESTION WAS SIGNIFICANTLY LESS EFFECTIVE THAN THE OTHER TWO PROCESSES. BASED ON THE RESULTS OF THE TESTING PROGRAM, IT WAS DETERMINED THAT COMPOSTING PRODUCED THE MOST HIGHLY STABILIZED WASTEWATER SLUDGE AND, THEREFORE, THE LEAST ENVIRONMENTAL IMPACT, IF DISPOSED OF IN THE ENVIRONMENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N5

IRIS ACCESSION NUMBER: EW007795

PUBLICATION DATE: MAY 82

TITLE: STATISTICAL ANALYSIS TO DERIVE IMPROVED STORMWATER QUALITY MODELS.

PERSONAL AUTHOR: JEWELL, THOMAS K.; ADRIAN, DONALD DEAN

DESCRIPTOR: *DATA ANALYSIS; *GUIDES; *MATHEMATICAL MODELS; *RESEARCH REPORTS; *STATISTICAL ANALYSIS; *STORMWATER; *SURFACE RUNOFF; *URBAN AREAS; *WATER COLLECTION; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 489-499P.

ABSTRACT: RESEARCHERS AND CONSULTANTS HAVE USED SIMULATION MODELS TO PREDICT THE QUANTITY AND QUALITY OF URBAN STORMWATER RUNOFF. THE QUALITY PORTIONS OF THESE MODELS, HOWEVER, HAVE NOT FOSTERED CONFIDENCE IN THEIR PREDICTIVE CAPABILITIES. LACK OF CONFIDENCE HAS BEEN ENGENDERED BY THE USE OF UNVERIFIED MODELS AND BY THE VARIABILITY OF MEASURED STORMWATER POLLUTION DATA. ANALYSIS OF AVAILABLE STORMWATER DATA FROM SEVERAL GEOGRAPHIC AREAS INDICATES THAT NO ONE MODEL CAN BE FOUND THAT ADEQUATELY PORTRAYS STORMWATER POLLUTANT WASHOFF PROCESSES FOR ALL BASINS. EVEN WHEN THE SAME MODEL IS SUPERIOR OVER OTHERS FOR MORE THAN ONE BASIN WITHIN THE SAME GEOGRAPHICAL AREA, THE ESTIMATED MODEL

PARAMETERS VARY SIGNIFICANTLY AMONG THE BASINS. THUS, IT IS CONCLUDED THAT LOCAL DATA SHOULD BE GATHERED FOR EACH BASIN TO BE MODELED AND A REPRESENTATIVE MODEL DEVELOPED USING MULTIPLE REGRESSION ANALYSIS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N5

IRIS ACCESSION NUMBER: EW007797

PUBLICATION DATE: SEP 81

TITLE: TECHNICAL REPORT: OPERATION AND MAINTENANCE COSTS FOR MUNICIPAL WASTEWATER FACILITIES.

DESCRIPTOR: *ADMINISTRATION; *COSTS; *ECONOMIC FACTORS; *FACILITIES; *MAINTENANCE; *MANAGEMENT; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *STAFFING; SLUDGE HANDLING; *WASTEWATER DISTRIBUTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 138P. FRD-22

ABSTRACT: THIS REPORT PRESENTS THE RESULTS OF A COMPREHENSIVE EFFORT TO OBTAIN AND ANALYZE OPERATIONS AND MAINTENANCE COSTS FOR SEPARATE SEWER SYSTEMS, AND FOR SECONDARY, ADVANCED SECONDARY, AND ADVANCED WASTEWATER TREATMENT PLANTS SERVED BY SEPARATE SEWER SYSTEMS. DATA IS SUMMARIZED FOR MORE THAN 900 TREATMENT PLANTS AND ALMOST 500 CONVEYANCE SYSTEMS. INCLUDED IS INFORMATION ON ADMINISTRATIVE COSTS, SLUDGE HANDLING COSTS, AND STAFFING.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007803

PUBLICATION DATE: 81

TITLE: RETAINING ADULT STUDENTS. INFORMATION SERIES NO. 225.

PERSONAL AUTHOR: DARKENWALD, GORDON G.

DESCRIPTOR: ACADEMIC PERSISTENCE; *ADULT DROPOUTS; *ADULT EDUCATION; ADULT STUDENTS; DROPOUT CHARACTERISTICS; DROPOUT PREVENTION; DROPOUT RATE; *DROPOUT RESEARCH; *SCHOOL HOLDING POWER; *STUDENT ATTRITION; *WITHDRAWAL (EDUCATION)

DESCRIPTIVE NOTE: 27P. PRICE: $2.00

ABSTRACT: THIS PAPER PROVIDES A SYNTHESIS OF RESEARCH AND THEORY DIRECTLY RELATED TO RETENTION OF ADULT STUDENTS. IN THE FIRST OF FIVE MAJOR SECTIONS, READERS ARE PROVIDED WITH A BRIEF DISCUSSION OF THE NATURE AND SIGNIFICANCE OF THE DROPOUT-RETENTION PROBLEM. SECTION 2 REVIEWS RESEARCH FINDINGS RELATING TO WHO DROPS OUT AND WHY. SOCIODEMOGRAPHIC, PSYCHOLOGICAL, EXTERNAL SITUATIONAL, PROGRAM CONTEXT, AND TEACHING-LEARNING FACTORS ARE EXAMINED IN THIS SECTION. THEORETICAL PERSPECTIVES ON DROPOUTS AND RETENTION ARE REVIEWED IN THE THIRD SECTION. THEORETICAL MODELS REVIEWED INCLUDE THE CONGRUENCE MODEL, EXPECTANCY-VALENCE MODEL, REINFORCEMENT OF ATTENDANCE MODEL, AND COST-BENEFIT MODEL. SECTION 4 OUTLINES A GENERAL THEORETICAL MODEL OF THE DROPOUT-PERSISTENCE PROCESS IN ADULT EDUCATION. THE FINAL SECTION DISCUSSES GENERAL GUIDELINES FOR PROMOTING ADULT STUDENT RETENTION.

AVAILABILITY: NATIONAL CENTER PUBLICATIONS, THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION, THE OHIO STATE UNIVERSITY, 1960 KENNY RD., COLUMBUS, OH 43210

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ABSTRACT: TO IMPROVE AMERICA'S TECHNOLOGICAL BASE, A NATIONAL ORGANIZATION THAT WOULD SUPPORT THE PHYSICAL SCIENCES IN MUCH THE SAME WAY THAT THAT THE NATIONAL INSTITUTES OF HEALTH HAVE SUPPORTED HEALTH SCIENCES IS CALLED FOR. INCLUDES PROPOSED ORGANIZATIONAL STRUCTURE AND FUNCTIONS OF A NATIONAL INSTITUTES OF ENGINEERING.

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CASE STUDIES	(5)	EW006852 EW006961 EW007336 EW007422 EW007573
CELLS	(1)	EW006282
*CERTIFICATION	(6)	EW006925 EW007200 EW007236 EW007270 EW007271 EW007439
CERTIFICATION	(1)	EW007738
CHANNELS	(1)	EW006950
CHECKLISTS	(1)	EW007691
*CHELATES	(1)	EW007440

*CHEMICAL ANALYSIS (9) EW006853 EW007241 EW007407 EW007411 EW007500 EW007501 EW007502 EW007612 EW007628
CHEMICAL ANALYSIS (2) EW007415 EW007581
*CHEMICAL DILUTION (1) EW007483
*CHEMICAL ENGINEERING (2) EW006936 EW007545
*CHEMICAL PRECIPITATION (1) EW007635
*CHEMICAL REACTIONS (5) EW006948 EW007415 EW007440 EW007510 EW007512
CHEMICAL REACTIONS (1) EW007635
*CHEMICALS (7) EW006300 EW007393 EW007421 EW007431 EW007640 EW007646 EW007743
CHEMICALS (2) EW007449 EW007461
CHEMICAL SAFETY (1) EW006300
*CHEMICAL TREATMENT (1) EW007247
*CHEMISTRY (10) EW006948 EW007407 EW007415 EW007440 EW007502 EW007544 EW007545 EW007591 EW007749 EW007750
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*CHEMOMETRIC TECHNIQUES (1) EW007793
*CHLORINATED HERBICIDES (1) EW007597
*CHLORINATION (6) EW007130 EW007366 EW007387 EW007426 EW007511 EW007733
CHLORINATION (2) EW006814 EW007588
*CHLORINE (6) EW006956 EW007244 EW007366 EW007387 EW007511 EW007514
*CHLORINE DIOXIDE (1) EW007511
*CHROMIUM (1) EW007305
*CITIZEN PARTICIPATION (4) EW007277 EW007752 EW007753 EW007754
CITIZEN PARTICIPATION (2) EW007658 EW007663
CITIZEN ROLE (1) EW007752
CLARIFICATION (1) EW007589
*CLARIFIERS (1) EW007734
*CLASSIFICATION (1) EW007271
CLASSIFICATION (2) EW007236 EW007270
CLEAN WATER (1) EW007752
*CLEAN WATER ACT (4) EW007080 EW007275 EW007408 EW007680
*CLIMATOLOGY (1) EW007499
*COAGULATION (1) EW007584

COAL COMBUSTION	(1)	EW007618
*COASTAL AREAS	(1)	EW007522
*COASTAL ZONES	(2)	EW006283 EW007388
*COBALT	(1)	EW007624
*COLLECTION SYSTEMS	(3)	EW007137 EW007328 EW007633
*COLLEGE PROGRAMS	(2)	EW007473 EW007474
*COLLEGE SCIENCE	(1)	EW007544
COLLEGE SCIENCE	(2)	EW007750 EW007864
COLLOID CHEMISTRY	(1)	EW006948
*COLORADO	(1)	EW007188
*COMBINED SEWER OVERFLOWS	(1)	EW006935
*COMBINED SEWERS	(1)	EW007519
COMBUSTION ANALYSIS	(1)	EW007433
*COMMUNICATIONS	(4)	EW007048 EW007131 EW007438 EW007495
COMMUNICATIONS	(3)	EW007194 EW007682 EW007683
*COMMUNITIES	(1)	EW007336
*COMMUNITY INVOLVEMENT	(1)	EW007495
*COMMUNITY RELATIONS	(3)	EW006901 EW006947 EW007682
*COMPARATIVE ANALYSIS	(2)	EW006927 EW007792
*COMPLIANCE	(8)	EW007338 EW007407 EW007574 EW007575 EW007576 EW007577 EW007578 EW007579
*COMPONENTS	(1)	EW007250
*COMPOSTING	(5)	EW007186 EW007301 EW007337 EW007472 EW007794
*COMPUTER APPLICATIONS	(6)	EW007435 EW007441 EW007519 EW007539 EW007590 EW007746
COMPUTER APPLICATIONS	(4)	EW007448 EW007489 EW007561 EW007747
*COMPUTER PROGRAMS	(1)	EW007590
*COMPUTERS	(4)	EW006899 EW007448 EW007561 EW007641
COMPUTERS	(2)	EW007198 EW007539
*CONFERENCE PROCEEDINGS	(2)	EW007580 EW007640
*CONFERENCE REPORTS	(2)	EW007366 EW007419
CONFERENCES	(1)	EW007748
*CONGRESS	(1)	EW007680

*CONSERVATION	(10)	EW006898 EW006947 EW007024 EW007276 EW007486 EW007487 EW007492 EW007504 EW007540 EW007740
CONSERVATION	(3)	EW007277 EW007537 EW007606
CONSERVATION (CONCEPT)	(2)	EW007753 EW007754
*CONSERVATION EDUCATION	(2)	EW006947 EW007418
*CONSERVATION (ENVIRONMENT)	(1)	EW007418
*CONSTRUCTION	(6)	EW006901 EW007192 EW007193 EW007340 EW007505 EW007562
CONSTRUCTION	(2)	EW006934 EW007188
*CONSTRUCTION COSTS	(1)	EW007432
*CONSTRUCTION GRANTS	(6)	EW007081 EW007082 EW007239 EW007680 EW007681 EW007792
CONSTRUCTION GRANTS	(2)	EW007738 EW007752
*CONSTRUCTION GRANTS PROGRAM	(1)	EW007562
*CONSULTING FIRMS	(1)	EW007452
*CONSUMER AFFAIRS	(1)	EW007495
*CONSUMER EDUCATION	(1)	EW007368
*CONTACTORS	(1)	EW007511
*CONTAMINANTS	(4)	EW006932 EW007185 EW007496 EW007514
CONTAMINANTS	(1)	EW006961
*CONTAMINATION	(4)	EW007245 EW007374 EW007476 EW007480
CONTAMINATION	(1)	EW006877
*CONTINGENCY PLANS	(1)	EW001785
*CONTRACT OPERATIONS	(1)	EW007240
*CONTRACTS	(1)	EW007452
*COOPERATIVE EXTENSION SERVICE	(1)	EW007022
COPPER	(1)	EW007515
CORRESPONDENCE COURSES	(1)	EW005077
*COST EFFECTIVENESS	(19)	EW006684 EW006932 EW006937 EW007240 EW007247 EW007329 EW007331 EW007336 EW007337 EW007350 EW007373 EW007441 EW007455 EW007485 EW007493 EW007561 EW007645 EW007746 EW007747
COST EFFECTIVENESS	(2)	EW007199 EW007740
*COSTS	(38)	EW006932 EW006937 EW006947 EW007080 EW007192 EW007239 EW007301 EW007329 EW007331 EW007337 EW007340 EW007345 EW007350 EW007434 EW007435 EW007447 EW007459 EW007461 EW007471 EW007486 EW007487 EW007488 EW007489 EW007508 EW007543 EW007571 EW007582 EW007606 EW007620 EW007622 EW007629 EW007635 EW007645 EW007740 EW007746 EW007747 EW007792 EW007797
COSTS	(9)	EW006876 EW007300 EW007373 EW007423 EW007433 EW007455 EW007561

EW007590 EW007680
*COURSE CONTENT (1) EW007258
COURSE CONTENT (1) EW007253
*COURSE DESCRIPTIONS (1) EW007409
CROSS CONNECTIONS (1) EW007481
*CURRICULUM (2) EW007274 EW007409
*CURRICULUM DEVELOPMENT (1) EW007738
*CYANAZINE (1) EW007598
*CYANIDE (1) EW007513
*DATA ACQUISITION (1) EW007187
DATA ACQUISITION (1) EW007188
*DATA ANALYSIS (3) EW006935 EW007185 EW007795
DATA ANALYSIS (2) EW007067 EW007187
*DATA BASES (1) EW007448
*DATA COLLECTION (4) EW006939 EW006960 EW007242 EW007489
*DECISION MAKING (3) EW007212 EW007590 EW006913

DECISION MAKING (2) EW007194 EW007678
*DECOMPOSITION (1) EW006854
DECOMPOSITION (1) EW007382
*DEFINITIONS (1) EW006944
*DENITRATION (1) EW007588
*DESALINATION (2) EW007432 EW007529
DESALINATION (1) EW007423
*DESALTING (1) EW007200
*DESIGN (45) EW006853 EW006931 EW006933 EW006936 EW006949 EW006950 EW007130
EW007132 EW007139 EW007186 EW007191 EW007239 EW007248 EW007263 EW007301
EW007328 EW007329 EW007330 EW007331 EW007336 EW007337 EW007339 EW007352
EW007354 EW007373 EW007433 EW007442 EW007444 EW007447 EW007455 EW007491
EW007505 EW007507 EW007509 EW007519 EW007529 EW007536 EW007540 EW007590
EW007622 EW007623 EW007635 EW007669 EW007741 EW007745
DESIGN (17) EW006900 EW006930 EW006934 EW006935 EW007067 EW007081 EW007082
EW007140 EW007199 EW007240 EW007300 EW007382 EW007409 EW007419 EW007432
EW007636 EW007685
*DESIGN METHODOLOGY (1) EW007636
*DETECTION (13) EW007501 EW007595 EW007596 EW007597 EW007598 EW007599 EW007600

EW007601 EW007602 EW007603 EW007604 EW007605 EW007616
DETECTION (5) EW007241 EW007614 EW007615 EW007617 EW007624
*DETECTION TECHNIQUES (1) EW007481
*DETENTION BASINS (1) EW007304
*DETERGENTS (1) EW007518
*DEVELOPING NATIONS (1) EW007641
DEVICES (2) EW007250 EW007258
*DEWATERING (3) EW006938 EW007302 EW007512
DEWATERING (2) EW007581 EW007582
DIGESTERS (1) EW007382
DIGESTION (1) EW007582
*DIOXINS (1) EW007500
*DIRECTORIES (3) EW006851 EW007451 EW007474
*DISEASES (1) EW007374
*DISINFECTION (10) EW007130 EW007138 EW007244 EW007345 EW007366 EW007429 EW007491 EW007511 EW007589 EW007733
DISINFECTION (3) EW007186 EW007337 EW007582
DISPOSAL (1) EW006300
*DISSOLVED OXYGEN (2) EW007457 EW007686
*DISSOLVED SOLIDS (1) EW007456
DISTILLATION (1) EW007744
*DITHIOCARBAMATE (1) EW007599
*DOMESTIC WASTES (1) EW007263
DOMESTIC WASTES (1) EW007305
*DRAINS (1) EW006949
*DREDGING (2) EW007275 EW007621
*DRINKING WATER (19) EW006877 EW006878 EW006911 EW006912 EW006932 EW006956 EW007245 EW007366 EW007374 EW007423 EW007488 EW007489 EW007493 EW007496 EW007530 EW007589 EW007606 EW007608 EW007744
DRINKING WATER (6) EW006897 EW007367 EW007420 EW007476 EW007610 EW007751
DROPOUT CHARACTERISTICS (1) EW007803
DROPOUT PREVENTION (1) EW007803
DROPOUT RATE (1) EW007803
*DROPOUT RESEARCH (1) EW007803

*DROUGHT (1) EW007028

DROUGHTS (1) EW006897

DYED WATER TESTING (1) EW007481

DYEING (1) EW007743

*DYNAMIC WAVE MODELS (1) EW007546

*EARTHWORMS (1) EW007629

*ECOLOGICAL FACTORS (4) EW006283 EW007190 EW007386 EW007592

ECOLOGICAL FACTORS (1) EW007387

*ECOLOGY (9) EW006854 EW007198 EW007376 EW007420 EW007427 EW007428 EW007499 EW007582 EW007591

*ECONOMIC FACTORS (25) EW006937 EW007080 EW007192 EW007240 EW007305 EW007340 EW007350 EW007368 EW007373 EW007434 EW007435 EW007436 EW007459 EW007486 EW007487 EW007488 EW007489 EW007507 EW007543 EW007571 EW007742 EW007745 EW007746 EW007747 EW007797

ECONOMIC FACTORS (8) EW006898 EW007512 EW007580 EW007585 EW007609 EW007740 EW007741 EW007744

*ECONOMICS (2) EW007329 EW007433

ECONOMICS (1) EW007753

*EDUCATIONAL GAMES (1) EW006928

*EDUCATIONAL MEDIA (1) EW006992

*EDUCATIONAL METHODS (1) EW007544

*EDUCATIONAL NEEDS (5) EW007128 EW007129 EW007200 EW007272 EW007439

*EDUCATIONAL PROGRAMS (5) EW006924 EW007048 EW007128 EW007272 EW007274

*EDUCATIONAL STRATEGIES (3) EW006924 EW006925 EW006926

EDUCATIONAL TECHNOLOGY (1) EW006992

*EDUCATION WORK RELATIONSHIP (1) EW007748

*EFFICIENCY (1) EW007438

*EFFLUENTS (32) EW006852 EW006876 EW007067 EW007190 EW007263 EW007300 EW007306 EW007338 EW007344 EW007345 EW007348 EW007426 EW007455 EW007471 EW007514 EW007518 EW007522 EW007583 EW007585 EW007593 EW007594 EW007595 EW007596 EW007597 EW007598 EW007599 EW007600 EW007601 EW007602 EW007603 EW007604 EW007605

EFFLUENTS (7) EW007247 EW007387 EW007508 EW007509 EW007536 EW007611 EW007681

ELECTRICAL RESISTIVITY (1) EW007478

*ELECTRICAL SYSTEMS (3) EW007254 EW007256 EW007257

ELECTRICAL SYSTEMS (1) EW007255

*ELECTRICITY	(5)	EW007254 EW007255 EW007256 EW007257 EW007258
ELECTRICITY	(1)	EW007538
*ELECTROANANALYTICAL TECHNIQUES	(1)	EW007498
ELECTROCHEMISTRY	(1)	EW007608
*ELECTRODIALYSIS	(1)	EW007744
ELECTRODIALYSIS	(1)	EW007586
ELECTROMAGNETISM	(1)	EW007254
*ELECTRONICS	(1)	EW007502
*ELECTROPLATING	(2)	EW007587 EW007628
ELEMENTARY SECONDARY EDUCATION	(2)	EW007748 EW007749
*ELEVATED RESERVOIRS	(1)	EW007505
*EMPLOYEE RELATIONS	(2)	EW007131 EW007370
*EMPLOYEES	(1)	EW007439
EMPLOYMENT	(1)	EW006960
*EMPLOYMENT OPPORTUNITIES	(1)	EW007748
EMPLOYMENT PATTERNS	(1)	EW007748
*ENERGY	(1)	EW007538
ENERGY	(1)	EW007529
*ENERGY CONSERVATION	(2)	EW007419 EW007743
*ENFORCEMENT	(3)	EW007338 EW007351 EW007576
ENFORCEMENT	(2)	EW007408 EW007680
*ENGINEERING	(5)	EW006887 EW006936 EW006944 EW006948 EW006950
ENGINEERING	(9)	EW007345 EW007433 EW007448 EW007529 EW007534 EW007536 EW007610 EW007629 EW007864
*ENGINEERING EDUCATION	(1)	EW007864
*ENVIRONMENT	(9)	EW005077 EW006679 EW006682 EW006854 EW007349 EW007380 EW007450 EW007534 EW007538
ENVIRONMENT	(3)	EW007421 EW007427 EW007748
*ENVIRONMENTAL ASSESSMENT	(3)	EW007198 EW007421 EW007678
*ENVIRONMENTAL EDUCATION	(4)	EW007022 EW007450 EW007748 EW007750
ENVIRONMENTAL EDUCATION	(5)	EW006947 EW007427 EW007428 EW007658 EW007663
*ENVIRONMENTAL ENGINEERING	(1)	EW007448

*ENVIRONMENTAL IMPACT (4) EW006876 EW006913 EW007275 EW007421

*ENVIRONMENTAL IMPACTS (12) EW006282 EW006283 EW007410 EW007499 EW007592 EW007614 EW007615 EW007616 EW007617 EW007618 EW007624 EW007625

ENVIRONMENTAL IMPACTS (1) EW007585

*ENVIRONMENTAL IMPACT STATEMENTS (2) EW007080 EW007386

ENVIRONMENTAL PROBLEMS (1) EW007420

*ENVIRONMENTAL PROTECTION AGENCY (6) EW007187 EW007349 EW007351 EW007451 EW007646 EW007681

ENVIRONMENTAL PROTECTION AGENCY (2) EW007475 EW007680

*ENVIRONMENTAL QUALITY (3) EW007450 EW007451 EW007520

ENVIRONMENTAL QUALITY (1) EW007678

*ENVIRONMENTAL RESEARCH (2) EW006683 EW007393

*ENVIRONMENTAL TECHNICIANS (1) EW007265

ENVIRONMENTAL TECHNICIANS (2) EW007748 EW007750

*EPA (3) EW007496 EW007562 EW007792

*EPIDEMIOLOGY (1) EW007378

EPIDEMIOLOGY (3) EW006300 EW006878 EW007185

*EQUIPMENT (43) EW006814 EW006931 EW006933 EW006938 EW007191 EW007244 EW007246 EW007248 EW007250 EW007252 EW007255 EW007257 EW007302 EW007354 EW007377 EW007432 EW007433 EW007443 EW007444 EW007445 EW007446 EW007447 EW007453 EW007455 EW007460 EW007479 EW007485 EW007494 EW007506 EW007508 EW007533 EW007539 EW007561 EW007572 EW007573 EW007620 EW007635 EW007733 EW007740 EW007741 EW007744 EW007745 EW007782

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EQUIPMENT MAINTENANCE (1) EW007647

*EQUIPMENT STANDARDS (1) EW007445

*EROSION (1) EW007192

*EROSION CONTROL (4) EW007024 EW007192 EW007276 EW007580

*ESTUARIES (1) EW007422

*ETHYLENEBISDITHIOCARBAMATE (1) EW007583

*EUTROPHICATION (2) EW007428 EW007591

EUTROPHICATION (1) EW007635

*EVALUATION (21) EW006887 EW006913 EW006927 EW006929 EW007139 EW007348 EW007349 EW007350 EW007368 EW007369 EW007371 EW007372 EW007376 EW007410 EW007459 EW007590 EW007627 EW007678 EW007680 EW007681 EW007691

EVALUATION (9) EW006937 EW007080 EW007188 EW007192 EW007199 EW007270 EW007305 EW007386 EW007443

EVALUATION CRITERIA (1) EW007372
*EVALUATION METHODS (1) EW006927
*EXAMINATIONS (1) EW007270
EXAMINATIONS (1) EW007271
*EXCHANGERS (1) EW007440
*EXCHANGES (1) EW007449
*EXTENDED AERATION (2) EW007301 EW007513
*FACILITIES (57) EW006185 EW006679 EW006814 EW006853 EW006901 EW006930 EW006931
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FARM MANAGEMENT (1) EW007024
*FATTY ACIDS (1) EW007460
*FECAL COLIFORMS (1) EW007511
*FEDERAL GOVERNMENT (4) EW007350 EW007408 EW007645 EW007646
*FEDERAL LEGISLATION (5) EW006679 EW007275 EW007408 EW007411 EW007738
FEDERAL LEGISLATION (1) EW001785
FEDERAL ROLE (2) EW007081 EW007082
*FILMS (5) EW006959 EW007024 EW007025 EW007028 EW007418
*FILTER PRESSES (1) EW007302
*FILTERS (4) EW006938 EW006939 EW007302 EW007455
*FILTRATION (2) EW006939 EW007454
FILTRATION (1) EW007374
*FINANCING (1) EW007645
FIRES (1) EW007213
FIRST AID (1) EW007749
*FISH (1) EW006685
FISHERIES (1) EW007641
*FLAME EMISSION TECHNIQUE (1) EW006957
*FLOCCULATION (1) EW007584

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FLOCCULATION	(1)	EW007512			
*FLOODS	(1)	EW007507			
FLOODS	(1)	EW006897			
*FLORESCENCE	(1)	EW007516			
*FLOTATION	(1)	EW007584			
*FLOW HYDRAULICS	(1)	EW007579			
*FLOW MEASUREMENT	(3)	EW007477	EW007483	EW007579	
*FLOW RATES	(4)	EW007445	EW007471	EW007477	EW007546
*FLOW REDUCTION	(1)	EW007336			
FLOW RESTRICTORS	(1)	EW007504			
*FLUID DYNAMICS	(1)	EW006950			
*FLUID FLOW	(1)	EW006950			
*FLUIDS	(1)	EW006950			
FOODS	(1)	EW007640			
*FUNGICIDES	(1)	EW007583			
*GAMES	(1)	EW006928			
GAMES	(1)	EW007372			
*GAS	(1)	EW007535			
GAS CHLORINATION	(1)	EW007244			
*GAS CHROMATOGRAPHY	(1)	EW007496			
GAS CHROMATOGRAPHY	(1)	EW007500			
*GAS-DRIVE SAMPLERS	(1)	EW007479			
GEOLOGY	(3)	EW007242	EW007378	EW007478	
*GEOPHYSICS	(1)	EW007478			
*GEORGIA	(1)	EW007504			
GEOTHERMAL	(1)	EW007618			
*GIARDIASIS	(1)	EW007374			
*GLOSSARIES	(1)	EW006944			
GOVERNMENT POLICY	(2)	EW007213	EW007520		
GOVERNMENT ROLE	(1)	EW007277			
*GRADUATE STUDY	(2)	EW007473	EW007474		
GRANT PROGRAMS	(1)	EW007187			

*GRANTS (1) EW007562

*GRANULAR ACTIVATED CARBON (1) EW007245

GRANULAR ACTIVATED CARBON (1) EW006877

*GREAT LAKES (1) EW007518

*GROB CLOSED-LOOP-STRIPPING ANALYSIS (1) EW006877

*GROUNDWATER (15) EW006932 EW007199 EW007242 EW007245 EW007303 EW007475 EW007476
EW007477 EW007478 EW007479 EW007480 EW007530 EW007537 EW007606 EW007613

GROUNDWATER (4) EW006961 EW007423 EW007679 EW007754

*GUIDELINES (18) EW006679 EW006927 EW006928 EW006929 EW006938 EW007276 EW007334
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EW007585 EW007691 EW007749

GUIDELINES (1) EW007048

*GUIDES (17) EW006300 EW006949 EW007254 EW007255 EW007339 EW007368 EW007448
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EW007579 EW007795

*HANDBOOKS (4) EW007199 EW007386 EW007431 EW007528

HANDBOOKS (2) EW006949 EW007048

HANDLING (1) EW006300

*HAZARD ASSESSMENT APPROACH (1) EW007514

*HAZARDOUS MATERIALS (13) EW001785 EW006300 EW006684 EW006854 EW007346 EW007376 EW007410
EW007421 EW007431 EW007500 EW007508 EW007640 EW007646

HAZARDOUS MATERIALS (5) EW007175 EW007426 EW007528 EW007658 EW007663

*HAZARDOUS SUBSTANCES (1) EW007521

*HAZARDOUS WASTES (5) EW006960 EW007025 EW007349 EW007431 EW007542

HEALTH (1) EW007431

*HEALTH EFFECTS (15) EW006878 EW006879 EW007185 EW007366 EW007378 EW007380 EW007393
EW007614 EW007615 EW007616 EW007617 EW007618 EW007619 EW007624 EW007625

HEALTH EFFECTS (4) EW006961 EW007190 EW007491 EW007540

*HEALTH PERSONNEL (1) EW007175

*HEARINGS (1) EW007680

*HEAT (1) EW007611

HEAT (1) EW007512

*HEAVY METALS (7) EW006937 EW007247 EW007498 EW007515 EW007543 EW007628 EW007684

HEAVY METALS (3) EW007304 EW007343 EW007380

*HERBICIDES (2) EW007592 EW007597

*HIGHER EDUCATION (6) EW006948 EW006950 EW007409 EW007473 EW007474 EW007544

HIGHER EDUCATION	(2)	EW007750 EW007864
*HISTORY	(1)	EW007499
*HUMANS	(1)	EW007625
*HUMIC SUBSTANCES	(1)	EW007367
*HUMUS	(1)	EW007397
*HYDRAULICS	(6)	EW006949 EW007354 EW007441 EW007442 EW007546 EW007579
*HYDROCARBONS	(1)	EW007522
*HYDROGEOLOGY	(2)	EW007478 EW007480
*HYDROLOGY	(1)	EW007479
HYDROLOGY	(4)	EW006944 EW007190 EW007242 EW007613
HYDROPOWER	(1)	EW006897
*IDENTIFICATION	(2)	EW006911 EW006912
*INCENTIVES	(1)	EW007437
*INCINERATION	(5)	EW007025 EW007248 EW007433 EW007581 EW007582
*INCINERATORS	(1)	EW007248
*INDEXES	(6)	EW006944 EW007451 EW007474 EW007534 EW007538 EW007545
*INDEXES (LOCATERS)	(2)	EW007449 EW007456
*INDICATOR ORGANISMS	(1)	EW007425
*INDUSTRIAL WASTES	(33)	EW006684 EW007305 EW007378 EW007426 EW007449 EW007460 EW007471 EW007543 EW007583 EW007584 EW007586 EW007587 EW007593 EW007594 EW007595 EW007596 EW007597 EW007598 EW007599 EW007600 EW007601 EW007602 EW007603 EW007604 EW007605 EW007609 EW007610 EW007612 EW007621 EW007628 EW007640 EW007684 EW007741
INDUSTRIAL WASTES	(3)	EW007344 EW007483 EW007611
*INDUSTRIAL WASTEWATER	(1)	EW007429
*INDUSTRIES	(1)	EW007048
*INDUSTRY	(8)	EW006679 EW007025 EW007213 EW007370 EW007421 EW007429 EW007607 EW007743
INDUSTRY	(7)	EW006897 EW006898 EW007419 EW007426 EW007540 EW007585 EW007738
*INFILTRATION	(7)	EW006852 EW007133 EW007134 EW007477 EW007481 EW007482 EW007483
*INFLOW	(5)	EW007133 EW007134 EW007481 EW007482 EW007483
*INFORMATION CENTERS	(1)	EW007475
INFORMATION CENTERS	(1)	EW007545
*INFORMATION DISSEMINATION	(3)	EW007022 EW007658 EW007663
*INFORMATION MANAGEMENT	(1)	EW007539

INFORMATION NETWORKS (2) EW007022 EW007448
*INFORMATION RETRIEVAL (1) EW007545
*INFORMATION SOURCES (8) EW006851 EW006960 EW007431 EW007448 EW007450 EW007538 EW007545 EW007641
*INFORMATION SYSTEMS (1) EW007022
*INHIBITION (1) EW007306
INJECTION WELLS (1) EW007613
*INPUT-OUTPUT MODELS (1) EW007492
*INSERVICE EDUCATION (1) EW007751
*INSITUFORM (1) EW007485
*INSPECTION (10) EW006679 EW007133 EW007134 EW007338 EW007484 EW007574 EW007575 EW007576 EW007578 EW007691
INSPECTION (1) EW007577
*INSPECTORS (5) EW007574 EW007575 EW007576 EW007577 EW007578
*INSTALLATION (1) EW007246
INSTITUTIONAL ADMINISTRATION (1) EW007864
*INSTITUTIONAL CHARACTERISTICS (1) EW007864
INSTITUTIONAL COOPERATION (1) EW007864
*INSTITUTIONAL ROLE (1) EW007864
*INSTRUCTION (9) EW006924 EW006925 EW006926 EW006928 EW006992 EW007081 EW007129 EW007409 EW007544
INSTRUCTION (1) EW007048
*INSTRUCTIONAL MATERIALS (80) EW001785 EW006853 EW006854 EW006911 EW006912 EW006948 EW006950 EW006956 EW006959 EW006961 EW007024 EW007025 EW007081 EW007082 EW007175 EW007191 EW007194 EW007212 EW007213 EW007244 EW007249 EW007250 EW007252 EW007253 EW007254 EW007255 EW007256 EW007257 EW007258 EW007274 EW007328 EW007346 EW007348 EW007352 EW007354 EW007377 EW007382 EW007386 EW007387 EW007388 EW007393 EW007397 EW007407 EW007415 EW007418 EW007427 EW007428 EW007433 EW007528 EW007529 EW007533 EW007535 EW007536 EW007540 EW007541 EW007542 EW007543 EW007544 EW007574 EW007575 EW007576 EW007577 EW007578 EW007595 EW007596 EW007597 EW007598 EW007599 EW007600 EW007601 EW007602 EW007647 EW007658 EW007663 EW007691 EW007733 EW007734 EW007735 EW007738 EW007782
*INSTRUCTIONAL MEDIA (1) EW007048
*INSTRUMENTATION (5) EW006683 EW006957 EW007246 EW007501 EW007502
INSTRUMENTATION (3) EW007533 EW007573 EW007734
*INTERIM STATUS TREATMENT (1) EW007349
INTERNATIONAL ORGANIZATIONS (1) EW007450
*INTERNATIONAL PROGRAMS (1) EW007300

*INVESTIGATIONS (1) EW007680
*ION EXCHANGE (1) EW007440
IONS (1) EW006948
*IRRIGATION (4) EW007350 EW007447 EW007541 EW007641
IRRIGATION (3) EW007190 EW007418 EW007606
*IRRIGATION SYSTEMS (1) EW007460
*JOB ANALYSIS (3) EW006929 EW007265 EW007369
*JOB SATISFACTION (2) EW007437 EW007438
*JOB SKILLS (3) EW006925 EW006926 EW007438
JOB SKILLS (3) EW006959 EW007265 EW007750
*JOB TRAINING (4) EW006924 EW006925 EW007647 EW007683
JOB TRAINING (1) EW007748
*KINETICS (2) EW007457 EW007510
*KJELDAHL (1) EW007573
*KJELDAHL ANALYSIS (1) EW007497
LABOR (1) EW007683
*LABORATORIES (1) EW007497
*LABORATORY EQUIPMENT (4) EW007497 EW007502 EW007607 EW007750
*LABORATORY PROCEDURES (24) EW006877 EW006911 EW006912 EW006956 EW007376 EW007407 EW007411 EW007426 EW007496 EW007508 EW007516 EW007517 EW007577 EW007595 EW007597 EW007599 EW007600 EW007601 EW007603 EW007604 EW007605 EW007612 EW007627 EW007750
*LABORATORY SAFETY (4) EW006300 EW007573 EW007749 EW007750
*LABORATORY TECHNIQUES (7) EW006957 EW007241 EW007498 EW007500 EW007501 EW007610 EW007627
LABORATORY TECHNIQUES (2) EW007346 EW007573
*LABORATORY TESTING (1) EW007491
LABORATORY TESTING (1) EW007393
LABORATORY TRAINING (2) EW007734 EW007735
LABOR FORCE (1) EW007748
*LABOR FORCE DEVELOPMENT (1) EW007748
*LAGOONS (2) EW007455 EW007631
*LAKES (4) EW007080 EW007422 EW007428 EW007591
*LAND APPLICATION (14) EW006879 EW006937 EW007185 EW007190 EW007343 EW007472 EW007503 EW007515 EW007541 EW007581 EW007582 EW007684 EW007746 EW007747

LAND APPLICATION	(1)	EW007630
*LANDFILLS	(1)	EW007535
LANDFILLS	(2)	EW007503 EW007613
*LAND MANAGEMENT	(2)	EW007024 EW007427
LAND MANAGEMENT	(4)	EW006947 EW007192 EW007386 EW007388
*LANDSAT	(1)	EW007187
LAND SPREADING	(1)	EW007503
*LAND TREATMENT	(4)	EW007515 EW007541 EW007746 EW007747
LAND TREATMENT	(2)	EW007025 EW007753
*LAND USE	(4)	EW007277 EW007388 EW007427 EW007505
*LAWS	(4)	EW007351 EW007408 EW007418 EW007679
*LEACHATES	(1)	EW007627
*LEACHING	(3)	EW006854 EW007303 EW007628
*LEAD	(1)	EW007247
*LEARNING	(1)	EW006928
LEARNING MODULES	(1)	EW007647
*LEGAL ASPECTS	(3)	EW006284 EW007576 EW007679
LEGAL ASPECTS	(1)	EW007476
*LEGAL FACTORS	(1)	EW007540
LEGAL PROBLEMS	(1)	EW006853
*LEGISLATION	(8)	EW007275 EW007334 EW007350 EW007351 EW007520 EW007537 EW007580 EW007679
LEGISLATION	(4)	EW006284 EW006898 EW007187 EW007680
LESSON PLANS	(1)	EW007751
*LIME	(1)	EW007630
LIME	(1)	EW007635
*LIME STABILIZATION	(1)	EW007630
*LIMNOLOGY	(1)	EW006685
*LIQUID CHROMATOGRAPHY	(1)	EW007501
LIQUID WASTES	(1)	EW007477
*LITERATURE REVIEWS	(1)	EW007425
LOCAL GOVERNMENT	(1)	EW007388
*LOGGING OPERATIONS	(1)	EW007276

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LUNGS	(1)	EW007380
*MAINTENANCE	(25)	EW006900 EW007129 EW007140 EW007240 EW007246 EW007373 EW007436 EW007443 EW007444 EW007452 EW007456 EW007461 EW007482 EW007484 EW007485 EW007494 EW007519 EW007571 EW007633 EW007647 EW007669 EW007691 EW007733 EW007782 EW007797
MAINTENANCE	(9)	EW006930 EW006933 EW007188 EW007248 EW007263 EW007265 EW007331 EW007409 EW007432
*MAINTENANCE (PREVENTATIVE)	(1)	EW007443
*MANAGEMENT	(70)	EW006185 EW006284 EW006853 EW006897 EW006898 EW006899 EW006913 EW006925 EW006926 EW006927 EW006928 EW006929 EW006933 EW006934 EW006947 EW006960 EW007025 EW007080 EW007082 EW007131 EW007134 EW007136 EW007140 EW007185 EW007188 EW007190 EW007193 EW007194 EW007199 EW007212 EW007272 EW007331 EW007343 EW007349 EW007368 EW007369 EW007370 EW007371 EW007372 EW007388 EW007418 EW007422 EW007423 EW007431 EW007434 EW007435 EW007436 EW007443 EW007444 EW007459 EW007476 EW007484 EW007486 EW007487 EW007489 EW007494 EW007495 EW007537 EW007541 EW007542 EW007561 EW007606 EW007641 EW007645 EW007678 EW007679 EW007682 EW007683 EW007691 EW007797
MANAGEMENT	(5)	EW006930 EW007022 EW007187 EW007409 EW007480
*MANAGEMENT GAMES	(1)	EW007372
*MANGANESE	(2)	EW007614 EW007615
MANGANESE	(1)	EW007515
*MANPOWER	(1)	EW007435
*MANPOWER DEVELOPMENT	(4)	EW007274 EW007437 EW007438 EW007738
*MANPOWER NEEDS	(3)	EW007434 EW007436 EW007439
MANPOWER UTILIZATION	(2)	EW007443 EW007484
*MANUALS	(8)	EW006913 EW007242 EW007276 EW007277 EW007334 EW007338 EW007579 EW007782
MANUALS	(2)	EW007377 EW007407
*MANUFACTURERS	(1)	EW006851
MAPPING	(1)	EW007478
*MARINE ENVIRONMENT	(4)	EW006282 EW006283 EW006284 EW007388
MARSHES	(1)	EW007330
*MATERIAL BALANCE	(1)	EW007301
*MATHEMATICAL APPLICATIONS	(5)	EW006939 EW006950 EW007536 EW007571 EW007572
MATHEMATICAL APPLICATIONS	(1)	EW007139
*MATHEMATICAL MODELING	(2)	EW007067 EW007510
MATHEMATICAL MODELING	(1)	EW007591
*MATHEMATICAL MODELS	(8)	EW007137 EW007441 EW007442 EW007456 EW007623 EW007686 EW007793

		EW007795
MATHEMATICAL MODELS	(2)	EW006684 EW007376
*MATHEMATICS	(1)	EW007536
*MAXIMUM CONTAMINANT LEVELS	(1)	EW007493
*MEASUREMENT	(4)	EW007348 EW007490 EW007498 EW007579
MEASUREMENT	(6)	EW006957 EW007254 EW007336 EW007376 EW007434 EW007477
*MEASUREMENT TECHNIQUES	(3)	EW007431 EW007734 EW007735
MEASUREMENT TECHNIQUES	(1)	EW007198
*MECHANICS	(1)	EW007265
MEDIA	(1)	EW006901
*MEMBRANE PROCESSING	(1)	EW007586
*MEMBRANE SYSTEMS	(1)	EW007432
*MERCURY	(2)	EW007247 EW007625
*METABOLISM	(1)	EW007513
*METALS	(3)	EW007378 EW007515 EW007587
METALS	(1)	EW007640
*METER READERS	(1)	EW007435
*METER READING	(1)	EW007438
*METERS	(2)	EW007246 EW007445
*METHANE	(2)	EW007382 EW007535
*METHANE GENERATION	(1)	EW007535
*METHANE RECOVERY	(1)	EW007535
METHODOLOGY	(1)	EW007137
*METRIC SYSTEM	(2)	EW006949 EW007490
*MICHIGAN	(5)	EW006930 EW007132 EW007274 EW007461 EW007518
*MICROBIOLOGY	(1)	EW007198
MICROBIOLOGY	(7)	EW006853 EW006854 EW007190 EW007374 EW007382 EW007588 EW007625
*MICROCIRCUITS	(1)	EW007502
*MICROCOMPUTERS	(2)	EW007502 EW007539
*MICROORGANISMS	(1)	EW007521

*MICROSCREENS (1) EW007455
MINING (5) EW007607 EW007608 EW007613 EW007614 EW007615
*MISSOURI (1) EW007133
*MIXERS (1) EW007506
*MODELING (7) EW006935 EW007067 EW007139 EW007489 EW007509 EW007546 EW007686
MODELING (3) EW006899 EW007137 EW007613
*MODELS (6) EW006948 EW007198 EW007368 EW007370 EW007421 EW007422
MODELS (4) EW006935 EW007571 EW007572 EW007641
*MODIFICATIONS (1) EW007352
*MONITORING (16) EW006679 EW006853 EW007199 EW007338 EW007348 EW007477 EW007478 EW007479 EW007480 EW007508 EW007574 EW007575 EW007576 EW007577 EW007578 EW007619
MONITORING (4) EW007242 EW007349 EW007484 EW007503
*MOTIVATION (1) EW006928
*MUNICIPALITIES (22) EW007186 EW007188 EW007263 EW007300 EW007337 EW007340 EW007344 EW007345 EW007423 EW007425 EW007442 EW007540 EW007610 EW007626 EW007629 EW007630 EW007636 EW007645 EW007691 EW007738 EW007792 EW007797
MUNICIPALITIES (8) EW006852 EW007132 EW007134 EW007343 EW007348 EW007419 EW007631 EW007752
*MUNICIPAL WASTES (15) EW007472 EW007517 EW007595 EW007596 EW007597 EW007598 EW007599 EW007600 EW007601 EW007602 EW007604 EW007605 EW007612 EW007746 EW007747
MUNICIPAL WASTES (2) EW007603 EW007684
*MUNICIPAL WASTEWATER (1) EW007541
*NATIONAL ORGANIZATIONS (1) EW007450
*NATURAL RESOURCES (6) EW006913 EW007427 EW007451 EW007540 EW007641 EW007748
NATURAL RESOURCES (3) EW007388 EW007450 EW007538
*NATURAL SYSTEMS (1) EW007420
*NEEDS ASSESSMENT (3) EW007128 EW007188 EW007368
NEEDS ASSESSMENT (1) EW007129
*NEW ENGLAND (1) EW005077
*NEW JERSEY (1) EW007134
*NEWS MEDIA (1) EW007682
NEWS REPORTING (1) EW007048
NEW YORK BIGHT (1) EW007621
*NICKEL (2) EW007616 EW007617

*NITRIFICATION	(1)	EW007306						
NITRIFICATION	(3)	EW007300	EW007588	EW007685				
*NITROGEN	(4)	EW007497	EW007573	EW007588	EW007685			
NITROGEN	(3)	EW007300	EW007306	EW007343				
*NITROGEN REMOVAL	(1)	EW007588						
*NOMOGRAPHS	(1)	EW007686						
*NONPOINT POLLUTION	(1)	EW007304						
NONPOINT POLLUTION	(1)	EW007187						
*NONPOINT SOURCE POLLUTION	(1)	EW007754						
*NONPOINT SOURCES	(1)	EW007193						
*NON-POTABLE WATER	(1)	EW007447						
NO-TILL FARMING	(1)	EW007580						
*NPDES	(7)	EW007338	EW007574	EW007575	EW007576	EW007577	EW007578	EW007579
*NUTRIENTS	(1)	EW007300						
NUTRIENTS	(1)	EW007591						
OBJECTIVES	(1)	EW007751						
OCCUPATIONAL HAZARDS	(3)	EW007616	EW007617	EW007625				
*OCCUPATIONAL HEALTH	(1)	EW006879						
OCCUPATIONAL HEALTH	(1)	EW006878						
OCCUPATIONAL HEALTH AND SAFETY	(1)	EW007175						
*OCCUPATIONAL INFORMATION	(1)	EW007265						
*OCCUPATIONAL SAFETY	(1)	EW006959						
OCCUPATIONAL SURVEYS	(1)	EW007265						
*OCEAN DUMPING	(1)	EW007410						
*OCEANOGRAPHY	(2)	EW007388	EW007621					
*OCEANS	(4)	EW006283	EW006284	EW007522	EW007621			
OCEANS	(1)	EW007410						
*ODORS	(1)	EW006814						
ODORS	(1)	EW007630						
*ODOR SCRUBBERS	(1)	EW006814						
*OHIO RIVER	(1)	EW006876						

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*OIL	(3)	EW001785 EW006957 EW007213
OIL	(1)	EW007528
*OIL DETECTION	(1)	EW006957
*OIL SPILL REMOVAL	(1)	EW007620
*OIL SPILLS	(4)	EW001785 EW007213 EW007528 EW007620
*ONSITE DETENTION	(1)	EW007507
*ONSITE DISPOSAL	(2)	EW006895 EW007334
*ONSITE SYSTEMS	(1)	EW007373
*ONSITE WASTEWATER SYSTEMS	(2)	EW007329 EW007331
*OPERATIONS (DREDGING)	(1)	EW007411
*OPERATIONS (FILLING)	(1)	EW007411
*OPERATIONS (WASTEWATER)	(88)	EW006814 EW006852 EW006930 EW006931 EW006933 EW006934 EW006936 EW006937 EW006938 EW006956 EW007130 EW007132 EW007139 EW007140 EW007186 EW007191 EW007212 EW007239 EW007240 EW007244 EW007248 EW007263 EW007300 EW007306 EW007328 EW007329 EW007337 EW007344 EW007345 EW007348 EW007352 EW007354 EW007373 EW007409 EW007419 EW007425 EW007433 EW007436 EW007443 EW007444 EW007446 EW007452 EW007453 EW007454 EW007456 EW007457 EW007460 EW007461 EW007471 EW007472 EW007484 EW007503 EW007506 EW007509 EW007511 EW007512 EW007513 EW007519 EW007533 EW007536 EW007561 EW007584 EW007585 EW007588 EW007593 EW007594 EW007615 EW007622 EW007623 EW007626 EW007630 EW007631 EW007633 EW007635 EW007636 EW007645 EW007669 EW007683 EW007691 EW007733 EW007734 EW007735 EW007738 EW007745 EW007782 EW007793 EW007794 EW007797
OPERATIONS (WASTEWATER)	(3)	EW006901 EW007129 EW007682
*OPERATIONS (WATER)	(6)	EW006932 EW007212 EW007432 EW007435 EW007572 EW007733
*OPERATORS	(4)	EW007236 EW007271 EW007439 EW007683
OPERATORS	(1)	EW007128
*OPERATOR TRAINING	(8)	EW007128 EW007129 EW007200 EW007236 EW007270 EW007271 EW007272 EW007274
*ORGANIC COMPOUNDS	(11)	EW006682 EW006684 EW006854 EW006877 EW006879 EW006911 EW006912 EW007407 EW007496 EW007521 EW007612
ORGANIC COMPOUNDS	(2)	EW006853 EW007794
*ORGANIC POLLUTANTS	(1)	EW007407
ORGANICS	(1)	EW007429
*ORGANIC WASTES	(1)	EW007382
ORGANISMS	(1)	EW006282
*ORGANIZATIONAL OBJECTIVES	(1)	EW007864
ORGANIZATIONS	(1)	EW007370

*ORGANIZATIONS (GROUPS) (1) EW007864
*ORGANOCHLORINE PESTICIDES (1) EW007600
*ORGANOHALIDE PESTICIDES (1) EW007601
*ORGANONITROGEN PESTICIDES (1) EW007604
*ORGANOPHOSPHORUS PESTICIDES (2) EW007602 EW007603
*OSMOSIS (1) EW007586
OXIDATION (1) EW007589
*OXIDATION DITCHES (1) EW007339
*OXYGEN (1) EW007457
*OZONATION (3) EW007138 EW007491 EW007510
*OZONE (5) EW007138 EW007345 EW007429 EW007491 EW007510
OZONE (2) EW007380 EW007589
*PAPER INDUSTRY (1) EW007426
*PAPER PULP (1) EW007426
*PARTICULATES (1) EW007304
*PATHOGENS (1) EW007425
PATHOGENS (1) EW007630
*PCB (1) EW007601
PERCOLATION (1) EW007477
*PERFORMANCE (1) EW007139
PERFORMANCE DATA (1) EW007635
*PERFORMANCE EVALUATION (51) EW006895 EW006932 EW006933 EW007130 EW007135 EW007136 EW007300 EW007302 EW007303 EW007306 EW007343 EW007351 EW007434 EW007435 EW007437 EW007453 EW007454 EW007455 EW007456 EW007460 EW007461 EW007472 EW007479 EW007481 EW007482 EW007483 EW007485 EW007498 EW007503 EW007506 EW007507 EW007512 EW007513 EW007519 EW007561 EW007573 EW007610 EW007622 EW007623 EW007628 EW007629 EW007631 EW007669 EW007685 EW007740 EW007741 EW007742 EW007745 EW007792 EW007793 EW007794
PERFORMANCE EVALUATION (7) EW007186 EW007438 EW007452 EW007511 EW007584 EW007680 EW007744
*PERMIT COMPLIANCE (1) EW007407
*PERMITS (1) EW007407
PERMITS (1) EW007338
*PERSONNEL (4) EW007236 EW007271 EW007369 EW007683
PERSONNEL (1) EW007270
*PESTICIDES (12) EW007175 EW007351 EW007583 EW007592 EW007596 EW007599 EW007600 EW007601 EW007602 EW007603 EW007604 EW007605

PESTICIDES	(3)	EW007421 EW007658 EW007663
*PETROLEUM	(2)	EW006957 EW007522
*PETROLEUM INDUSTRY	(1)	EW007213
PETROLEUM INDUSTRY	(1)	EW001785
*PHASE ISOLATION	(1)	EW007631
*PHENOLS	(1)	EW007510
*PHOSPHOROUS	(1)	EW007635
PHOSPHOROUS	(1)	EW007300
*PHOSPHOROUS REMOVAL	(1)	EW007635
*PHOSPHORUS	(2)	EW007305 EW007518
*PHOTOGRAPHY	(1)	EW006851
*PHYSICAL CHEMICAL TREATMENT	(1)	EW007622
*PICKLING	(1)	EW007305
PIEZOMETERS	(1)	EW007479
*PILOT PLANTS	(3)	EW007138 EW007622 EW007741
*PILOT STUDIES	(2)	EW007455 EW007583
PILOT TESTS	(1)	EW007302
*PIPES	(8)	EW006878 EW006949 EW006950 EW007133 EW007137 EW007441 EW007485 EW007571
PIPES	(1)	EW007633
*PLANNING	(23)	EW006185 EW006913 EW006934 EW006935 EW006937 EW007081 EW007134 EW007187 EW007188 EW007339 EW007368 EW007370 EW007459 EW007492 EW007494 EW007505 EW007529 EW007590 EW007606 EW007678 EW007683 EW007752 EW007753
PLANNING	(19)	EW006898 EW006899 EW006900 EW006901 EW007080 EW007136 EW007193 EW007212 EW007213 EW007386 EW007388 EW007443 EW007476 EW007484 EW007504 EW007582 EW007626 EW007738 EW007751
*PLANTS	(2)	EW006854 EW007625
*PLATING WASTES	(1)	EW007543
PLUMBING	(1)	EW006949
*PLUMBING EQUIPMENT	(1)	EW007740
*PNEUMATICS	(4)	EW007249 EW007250 EW007252 EW007253
POISONING	(1)	EW007175
POLICIES	(2)	EW007334 EW007452
*POLICY	(3)	EW006284 EW007350 EW007537
POLICY	(1)	EW007410

*POLLUTANTS (8) EW006282 EW006911 EW006912 EW007241 EW007380 EW007393 EW007521 EW007612

POLLUTANTS (3) EW007199 EW007242 EW007407

*POLLUTION (15) EW006679 EW006876 EW007187 EW007213 EW007351 EW007410 EW007420 EW007611 EW007614 EW007616 EW007617 EW007620 EW007621 EW007624 EW007748

*POLLUTION ABATEMENT (1) EW007480

*POLLUTION CONTROL (16) EW007022 EW007048 EW007193 EW007276 EW007338 EW007378 EW007451 EW007459 EW007528 EW007574 EW007583 EW007591 EW007608 EW007611 EW007613 EW007792

POLLUTION CONTROL (13) EW006930 EW007450 EW007476 EW007507 EW007534 EW007575 EW007576 EW007577 EW007578 EW007587 EW007610 EW007681 EW007686

*POLYCHLORINATED BIPHENYLS (1) EW007646

*POLYMER INJECTION (1) EW007633

*POLYMERS (3) EW007302 EW007440 EW007633

*PONDS (2) EW007135 EW007631

PONDS (2) EW007330 EW007339

POPULATION DYNAMICS (1) EW006282

*POST SECONDARY EDUCATION (78) EW001785 EW005077 EW006853 EW006854 EW006911 EW006912 EW006924 EW006925 EW006926 EW006927 EW006928 EW006929 EW006956 EW006961 EW006992 EW007024 EW007025 EW007081 EW007082 EW007175 EW007191 EW007194 EW007212 EW007213 EW007244 EW007249 EW007250 EW007252 EW007253 EW007254 EW007255 EW007256 EW007257 EW007258 EW007274 EW007328 EW007346 EW007348 EW007352 EW007354 EW007371 EW007372 EW007382 EW007386 EW007387 EW007393 EW007397 EW007407 EW007415 EW007418 EW007427 EW007428 EW007433 EW007528 EW007529 EW007533 EW007535 EW007536 EW007540 EW007541 EW007542 EW007543 EW007544 EW007574 EW007575 EW007576 EW007577 EW007578 EW007647 EW007691 EW007733 EW007734 EW007735 EW007738 EW007751 EW007752 EW007753 EW007782

POST SECONDARY EDUCATION (4) EW007658 EW007663 EW007748 EW007750

*POTABLE WATER (4) EW006961 EW007447 EW007486 EW007487

POTABLE WATER (1) EW007374

*POWER PLANTS (2) EW007387 EW007611

*PRECOATING (1) EW006938

*PRESS RELATIONS (1) EW007682

PRESSURE SEWERS (1) EW007354

*PRETREATMENT (1) EW007684

PRETREATMENT (2) EW007491 EW007585

*PRIORITY POLLUTANTS (1) EW007508

*PROBLEM SOLVING (3) EW006950 EW007370 EW007446

PROBLEM SOLVING (4) EW006899 EW006900 EW007484 EW007626

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*PROCESS CONTROL (6) EW007419 EW007533 EW007636 EW007734 EW007735 EW007782
*PROCESS DESCRIPTION (1) EW007793
*PROCESS DESIGN (3) EW006936 EW007588 EW007685
*PROCESS OPTIMATION (1) EW007302
*PRODUCTIVITY (5) EW007370 EW007434 EW007435 EW007437 EW007438
*PROFESSIONAL ORGANIZATIONS (1) EW005077
*PROGRAM ADMINISTRATION (3) EW007494 EW007495 EW007606

*PROGRAM DESCRIPTIONS (22) EW006900 EW006901 EW006913 EW006930 EW006947 EW007022 EW007128 EW007236 EW007274 EW007275 EW007349 EW007388 EW007409 EW007435 EW007436 EW007439 EW007443 EW007473 EW007476 EW007484 EW007494 EW007504
PROGRAM DESCRIPTIONS (4) EW007271 EW007272 EW007351 EW007792
*PROGRAM DEVELOPMENT (2) EW007443 EW007476
PROGRAM DEVELOPMENT (1) EW007270
*PROGRAMED INSTRUCTION (1) EW007194
*PROGRAM EVALAUTION (1) EW007562
*PROGRAM EVALUATION (2) EW007371 EW007646
*PROGRAM PLANNING (2) EW006185 EW007336
*PROJECT EVALUATION (1) EW007386
*PROJECT PLANNING (2) EW007082 EW007136
PROJECT PLANNING (2) EW007081 EW007277
*PUBLIC BENEFITS (1) EW007277
*PUBLIC HEALTH (8) EW006879 EW007175 EW007185 EW007349 EW007366 EW007374 EW007410 EW007520
PUBLIC HEALTH (7) EW006878 EW007425 EW007426 EW007451 EW007589 EW007746 EW007747
*PUBLIC INFORMATION (1) EW006901
PUBLIC NOTIFICATION (1) EW007493
*PUBLIC OPINION (2) EW007499 EW007504
*PUBLIC PARTICIPATION (2) EW006185 EW007136
*PUBLIC RELATIONS (5) EW006901 EW007048 EW007493 EW007495 EW007682
PUBLIC RELATIONS (1) EW006947
*PUBLIC WORKS (2) EW007452 EW007680
*PUMPING STATIONS (1) EW007669
PUMPING STATIONS (1) EW007340

*PUMPS (3) EW006933 EW006950 EW007572
PUMPS (2) EW007354 EW007530
*PUMP SELECTION (1) EW007572
*PURIFICATION (1) EW007744
PURIFICATION (2) EW006961 EW007742
*QUALITY CIRCLE (1) EW007370
*QUALITY CONTROL (1) EW007627
RADIOACTIVE MATERIALS (3) EW007608 EW007610 EW007621
*RADIOACTIVE WASTES (1) EW007410
RADIOACTIVE WASTES (1) EW007607
*RADIOISOTOPES (1) EW006683
RAPID INFILTRATION (1) EW006852
*RATES (1) EW007645
*RATE STRUCTURES (2) EW007486 EW007487
*REACTION KINETICS (2) EW006931 EW007510
*RECLAMATION (2) EW007456 EW007745
*RECOMMENDATIONS (10) EW007129 EW007135 EW007193 EW007271 EW007272 EW007350 EW007351 EW007376 EW007410 EW007539
RECOMMENDATIONS (2) EW007270 EW007349
*RECORDKEEPING (1) EW007436
*RECORDS (1) EW007436
*RECREATION (1) EW007277
RECREATION (1) EW006947
*RECYCLING (13) EW006853 EW007025 EW007247 EW007418 EW007420 EW007449 EW007456 EW007492 EW007540 EW007587 EW007593 EW007594 EW007743
RECYCLING (4) EW006961 EW007377 EW007423 EW007582
*REFERENCE MATERIALS (2) EW006944 EW006950
*REGENERATION WASTES (1) EW006895
REGISTRATION (1) EW007351
*REGULATIONS (15) EW006679 EW007135 EW007275 EW007334 EW007338 EW007349 EW007351 EW007408 EW007410 EW007459 EW007488 EW007518 EW007520 EW007646 EW007679
REGULATIONS (12) EW001785 EW006876 EW007081 EW007082 EW007134 EW007187 EW007411 EW007489 EW007495 EW007543 EW007582 EW007585
*REHABILITATION (2) EW006900 EW007134

*RELIABILITY	(1)	EW007517
*REMOTE SENSING	(1)	EW007187
REMOTE SENSING	(1)	EW007611
*REQUIREMENTS	(1)	EW007626
REQUIREMENTS	(1)	EW007439
*RESEARCH	(8)	EW006682 EW006683 EW006685 EW007304 EW007376 EW007425 EW007499 EW007541
RESEARCH	(2)	EW007475 EW007545
*RESEARCH AND DEVELOPMENT CENTERS	(1)	EW007864
*RESEARCH CENTERS	(1)	EW007475
*RESEARCH NEEDS	(2)	EW007371 EW007626
RESEARCH NEEDS	(2)	EW006284 EW007367
*RESEARCH PROGRAMS	(1)	EW007474
RESEARCH PROGRAMS	(1)	EW007473
*RESEARCH REPORTS	(90)	EW006283 EW006852 EW006876 EW006877 EW006887 EW006895 EW006939 EW006960 EW007022 EW007136 EW007138 EW007302 EW007343 EW007344 EW007345 EW007367 EW007378 EW007380 EW007393 EW007397 EW007440 EW007453 EW007454 EW007455 EW007457 EW007472 EW007477 EW007478 EW007491 EW007492 EW007496 EW007501 EW007509 EW007510 EW007511 EW007512 EW007513 EW007515 EW007516 EW007521 EW007522 EW007546 EW007583 EW007584 EW007586 EW007589 EW007591 EW007592 EW007596 EW007598 EW007600 EW007603 EW007604 EW007605 EW007607 EW007608 EW007609 EW007610 EW007611 EW007612 EW007613 EW007614 EW007615 EW007616 EW007617 EW007618 EW007619 EW007620 EW007621 EW007623 EW007624 EW007625 EW007627 EW007628 EW007629 EW007630 EW007631 EW007633 EW007640 EW007645 EW007685 EW007740 EW007741 EW007742 EW007743 EW007744 EW007745 EW007793 EW007794 EW007795
RESEARCH REPORTS	(10)	EW006878 EW007137 EW007366 EW007387 EW007452 EW007595 EW007597 EW007599 EW007602 EW007646
*RESEARCH REVIEWS	(1)	EW007529
*RESERVOIRS	(1)	EW007505
*RESIDENTIAL USE	(1)	EW007740
RESIDENTIAL USES	(1)	EW007504
RESIDUALS	(1)	EW007514
*RESOURCE MATERIALS	(3)	EW007538 EW007658 EW007749
*RESOURCE RECOVERY	(7)	EW006851 EW007247 EW007377 EW007449 EW007535 EW007543 EW007587
*RETENTION	(1)	EW007304
*REVERSE OSMOSIS	(4)	EW007432 EW007456 EW007586 EW007742
*RISK ANALYSIS	(1)	EW007421
*RISK ASSESSMENT	(1)	EW007185

*RIVERS	(4)	EW007275 EW007277 EW007422 EW007686
*ROTARY KILN INCINERATORS	(1)	EW007248
*RUNOFF	(2)	EW007304 EW007507
*RURAL AREAS	(1)	EW007080
*SAFE DRINKING WATER ACT	(1)	EW007493
*SAFETY	(5)	EW006300 EW006959 EW007213 EW007431 EW007749
SAFETY	(3)	EW007482 EW007573 EW007691
SAFETY EDUCATION	(1)	EW006959
*SALINE WATER	(1)	EW007744
*SAMPLING	(8)	EW006911 EW006912 EW007242 EW007411 EW007471 EW007479 EW007508 EW007574
SAMPLING	(4)	EW006939 EW006956 EW007198 EW007374
SAMPLING TECHNIQUES	(1)	EW007411
SANITARY SEWERS	(2)	EW007461 EW007482
SANITATION	(1)	EW007641
*SCHEDULING	(1)	EW007484
*SCHEMATICS	(1)	EW007257
SCIENCE	(1)	EW007499
*SCIENCE EDUCATION	(2)	EW007427 EW007544
SCIENCE EDUCATION	(5)	EW007658 EW007663 EW007749 EW007750 EW007864
*SCIENCE LABORATORIES	(1)	EW007749
*SCIENTIFIC RESEARCH	(1)	EW007520
SCIENTIFIC RESEARCH	(1)	EW007499
*SEASONAL RATES	(1)	EW007487
*SECONDARY EDUCATION	(1)	EW007427
SECONDARY EDUCATION	(1)	EW007750
SECONDARY SCHOOL SCIENCE	(2)	EW007749 EW007750
*SECONDARY TREATMENT	(3)	EW007631 EW007681 EW007684
*SEDIMENT CONTROL	(1)	EW007192
*SEDIMENTS	(1)	EW007411
SEDIMENTS	(1)	EW007276
*SELENIUM	(1)	EW007618

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*SELF EVALUATION (1) EW006927
*SEMINARS (3) EW007300 EW007520 EW007731
*SENSORS (1) EW007246
*SEPTAGE (3) EW007331 EW007425 EW007454
SEPTIC SYSTEMS (1) EW007303
*SEPTIC TANKS (3) EW006895 EW007303 EW007454
*SERVICE CONTRACTS (1) EW007452
*SETTLING (1) EW007304
*SEWAGE (12) EW006185 EW006283 EW007186 EW007433 EW007453 EW007586 EW007588 EW007610 EW007621 EW007669 EW007746 EW007747
SEWAGE (7) EW006933 EW006934 EW007337 EW007429 EW007472 EW007503 EW007536
*SEWAGE DISPOSAL SYSTEMS (1) EW006895
*SEWAGE OUTFALLS (1) EW006283
*SEWAGE SLUDGE (3) EW006284 EW007581 EW007582
*SEWAGE TREATMENT (2) EW006936 EW007132
*SEWER BANS (1) EW007134
*SEWER REPLACEMENT (1) EW007485
*SEWERS (14) EW006935 EW006949 EW007134 EW007188 EW007303 EW007328 EW007340 EW007354 EW007484 EW007485 EW007519 EW007546 EW007633 EW007669
*SEWER SYSTEMS (8) EW007133 EW007134 EW007137 EW007444 EW007481 EW007482 EW007519 EW007546
SEWER SYSTEMS (1) EW006959
SHORELINES (1) EW007388
*SILVER (3) EW006851 EW007247 EW007378
*SILVER RECOVERY (1) EW006851
*SIMULATION (3) EW006928 EW007372 EW007422
*SIMULATIONS (1) EW007746
SITE SELECTION (1) EW007503
*SKILL DEVELOPMENT (1) EW006926
SKILL DEVELOPMENT (1) EW007750
*SLUDGE (30) EW006879 EW006937 EW006938 EW007132 EW007185 EW007186 EW007248 EW007301 EW007302 EW007337 EW007343 EW007382 EW007425 EW007457 EW007472 EW007503 EW007512 EW007513 EW007533 EW007581 EW007582 EW007621 EW007628 EW007629 EW007630 EW007684 EW007685 EW007735 EW007782 EW007794
SLUDGE (10) EW006283 EW006934 EW006936 EW006960 EW007139 EW007331 EW007378 EW007454 EW007506 EW007636

*SLUDGE CONDITIONING	(2)	EW007454 EW007512
SLUDGE DEWATERING	(1)	EW007425
*SLUDGE DISPOSAL	(7)	EW006284 EW007248 EW007433 EW007506 EW007581 EW007582 EW007636
*SLUDGE DRYING	(1)	EW007453
SLUDGE HANDLING	(1)	EW007797
SLUDGE STABILIZATION	(1)	EW007425
*SLUDGE TREATMENT	(5)	EW006938 EW007581 EW007582 EW007636 EW007782
SLUDGE TREATMENT	(2)	EW007382 EW007513
*SMALL COMMUNITIES	(2)	EW006185 EW007339
*SMALL SYSTEMS	(1)	EW007488
*SMALL WASTEWATER FLOWS	(1)	EW007336
SMALL WASTEWATER FLOWS	(1)	EW007334
*SMOKE TESTING	(2)	EW007481 EW007482
SOCIAL FACTORS	(1)	EW007080
*SODIUM BOROHYDRIDE	(1)	EW007247
*SOIL ABSORPTION	(1)	EW006895
SOIL CHEMISTRY	(1)	EW007190
*SOIL EROSION	(3)	EW007024 EW007276 EW007580
SOIL EROSION	(1)	EW007192
*SOILS	(2)	EW006854 EW007515
SOILS	(4)	EW006895 EW006948 EW007192 EW007397
*SOLIDS	(1)	EW007137
*SOLIDS HANDLING	(1)	EW007446
*SOLID-STATE COMPONENTS	(1)	EW007256
SOLID STATE COMPONENTS	(1)	EW007258
*SOLID WASTES	(3)	EW006960 EW007377 EW007517
SOLID WASTES	(4)	EW007382 EW007542 EW007636 EW007782
*SPECIFICATIONS	(1)	EW007490
*SPILLS	(2)	EW007213 EW007528
*STABILIZATION PONDS	(3)	EW007135 EW007339 EW007420
*STAFFING	(1)	EW007797
*STANDARDS	(15)	EW006876 EW007067 EW007263 EW007349 EW007408 EW007488 EW007490 EW007493 EW007496 EW007514 EW007518 EW007520 EW007585 EW007631 EW007681

STANDARDS (8) EW007275 EW007489 EW007614 EW007615 EW007616 EW007617 EW007618 EW007624

*START-UP (1) EW007446

*STATE AGENCIES (2) EW007082 EW007451

STATE AGENCIES (2) EW005077 EW007081

STATE GOVERNMENT (1) EW007388

*STATE OF THE ART REVIEWS (1) EW007542

*STATE-OF-THE-ART REVIEWS (17) EW006853 EW006897 EW006899 EW006911 EW006912 EW006948 EW006992 EW007270 EW007367 EW007371 EW007422 EW007499 EW007501 EW007502 EW007540 EW007543 EW007626

*STATE PROGRAMS (7) EW007200 EW007236 EW007272 EW007351 EW007388 EW007439 EW007476

*STATE REGULATIONS (1) EW007334

*STATE SURVEYS (1) EW007340

*STATISTICAL ANALYSIS (4) EW007509 EW007627 EW007793 EW007795

*STATISTICAL APPLICATION (1) EW007517

*STATISTICS (2) EW006960 EW007493

STATISTICS (1) EW007139

*STATUS REPORTS (1) EW007439

STATUS REPORTS (1) EW007792

*STOICHIOMETRY (1) EW007510

STORAGE (1) EW007530

STORAGE FACILITIES (1) EW007507

*STORM SEWERS (1) EW007444

STORM SEWERS (1) EW007461

*STORMWATER (5) EW006935 EW007304 EW007507 EW007519 EW007795

STORMWATER (3) EW007444 EW007536 EW007546

*STRATEGIES (1) EW007626

*STREAMS (2) EW007198 EW007591

*STREETER-PHELPS EQUATIONS (1) EW007686

*STUDENT ATTRITION (1) EW007803

*STUDY GUIDES (3) EW007081 EW007082 EW007352

STUDY GUIDES (1) EW006956

*SUBMERSIBLE MIXERS (1) EW007506

*SUPERVISION (11) EW006924 EW006925 EW006926 EW007131 EW007194 EW007212 EW007368

EW007369 EW007370 EW007371 EW007372
*SUPERVISORS (1) EW006929
*SUPERVISORY TRAINING (4) EW006924 EW006925 EW006926 EW006929
*SURFACE RUNOFF (2) EW006935 EW007795
*SURVEYS (11) EW006960 EW007200 EW007236 EW007272 EW007340 EW007439 EW007452 EW007471 EW007473 EW007504 EW007792
SURVEYS (2) EW007128 EW007493
*SUSPENDED SOLIDS (1) EW007246
SUSPENDED SOLIDS (3) EW007135 EW007457 EW007509
*SYMBOLS (2) EW007252 EW007257
SYMBOLS (1) EW007253
*SYMPOSIA (2) EW007380 EW007501
*SYSTEMS ANALYSIS (1) EW007369
*SYSTEMS APPROACH (3) EW007369 EW007422 EW007641
*TANNING (1) EW007305
*TASK ANALYSIS (5) EW007265 EW007434 EW007435 EW007437 EW007438
*TEACHER EDUCATION (1) EW007544
*TEACHING GUIDES (4) EW007081 EW007253 EW007258 EW007348
*TEACHING METHODS (1) EW006928
TECHNICAL EDUCATION (5) EW007544 EW007658 EW007663 EW007748 EW007750
*TECHNICAL PAPERS (1) EW007640
*TECHNICAL REPORTS (1) EW007193
*TECHNIQUES (1) EW007620
*TECHNOLOGICAL ADVANCEMENTS (13) EW006887 EW006936 EW006961 EW007132 EW007263 EW007300 EW007485 EW007501 EW007502 EW007741 EW007742 EW007744 EW007745
TECHNOLOGICAL ADVANCEMENTS (2) EW006899 EW007540
*TECHNOLOGICAL ALTERNATIVES (1) EW007331
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*TELECOMMUNICATIONS (1) EW006992
*TELEVISION (2) EW006992 EW007133
TEMPERATURE (1) EW006685
TERMINOLOGY (1) EW007490

*TERRESTRIAL ENVIRONMENTS (1) EW007367
TERRESTRIAL ENVIRONMENTS (1) EW007386
TERTIARY SEWAGE TREATMENT (1) EW007588
*TESTING (6) EW006927 EW007270 EW007376 EW007497 EW007520 EW007573
TESTING (4) EW006282 EW006956 EW006961 EW007348
TESTING PROBLEMS (1) EW006927
*TESTS (1) EW007346
*TEXAS (1) EW00693[illegible]
*TEXTILE INDUSTRY (1) EW007743
*THEORIES (1) EW007249
THEORY (1) EW007253
THERMAL METHODS (1) EW007478
*THERMAL POLLUTION (1) EW007611
THERMAL PROCESSING (1) EW007542
*THERMODYNAMICS (1) EW006684
*THESAURI (1) EW007534
*TIMBER INDUSTRY (1) EW007276
*TOXIC CHEMICALS (1) EW007245
*TOXICITY (11) EW006682 EW006685 EW007387 EW007393 EW007614 EW007615 EW007616
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TOXICITY (2) EW007583 EW007617
*TOXICOLOGY (7) EW007346 EW007376 EW007378 EW007380 EW007393 EW007473 EW007474
TOXICOLOGY (1) EW007387
*TOXIC SUBSTANCES (22) EW006685 EW006854 EW006932 EW007185 EW007245 EW007346 EW007393
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TOXIC SUBSTANCES (3) EW006300 EW007378 EW007528
*TRACE ANALYSIS (2) EW007241 EW007500
*TRACE ELEMENTS (2) EW007241 EW007619
*TRACE METALS (2) EW007378 EW007498
TRACE METALS (1) EW007380
TRACE ORGANICS (1) EW006877
*TRACERS (1) EW006683
*TRAINERS (1) EW007751

*TRAINING (17) EW001785 EW006924 EW007025 EW007128 EW007129 EW007131 EW007213 EW007346 EW007368 EW007369 EW007370 EW007371 EW007372 EW007438 EW007439 EW007683 EW007751
TRAINING (3) EW007407 EW007733 EW007738
*TRAINING MATERIALS (1) EW007368
*TRAINING METHODS (1) EW007369
TRAINING NEEDS (1) EW007272
*TRAINING PROGRAMS (24) EW005077 EW006925 EW006926 EW006927 EW006928 EW007128 EW007129 EW007175 EW007200 EW007213 EW007236 EW007271 EW007272 EW007274 EW007368 EW007369 EW007370 EW007371 EW007372 EW007574 EW007575 EW007576 EW007577 EW007578
TRANSFORMERS (1) EW007254
*TRANSPORT (1) EW007619
*TRANSPORTATION (1) EW007377
*TRENCHES (1) EW007344
*TRIAZINE PESTICIDES (1) EW007605
*TRICHLOROETHYLENE (1) EW006932
*TRICKLING FILTERS (1) EW007509
*TRIHALOMETHANE (1) EW007589
*TROUBLESHOOTING (1) EW007446
TROUBLESHOOTING (1) EW007253
*TURBIDITY (1) EW006956
ULTRAFILTRATION (1) EW007586
*UNDERGRADUATE STUDY (1) EW007409
UNIONS (1) EW007683
UNIT PROCESSES (2) EW007691 EW007782
*UNIVERSITIES (2) EW007473 EW007474
UPGRADING (1) EW007352
*URBAN AREAS (4) EW007304 EW007423 EW007507 EW007795
*UREA PESTICIDES (1) EW007596
*USER CHARGES (1) EW007645
*UTILITIES (14) EW006959 EW007140 EW007212 EW007419 EW007434 EW007435 EW007436 EW007437 EW007438 EW007488 EW007494 EW007495 EW007640 EW007645
UTILITIES (5) EW005077 EW007272 EW007489 EW007635 EW007647
*UTILITIES (WATER) (2) EW007270 EW007445

*VACUUM FILTRATION (1) EW007454
VACUUM PUMPS (1) EW007446
*VACUUM SEWERS (1) EW007328
VALVES (1) EW007572
*VANDOSE ZONE (1) EW007477
*VAPOR-COMPRESSION EVAPORATOR (1) EW007741
*VEGETATION SELECTION (1) EW007541
*VERICOMPOSTING (1) EW007629
*VERTEAM CIRCLE (1) EW007370
*VIDEO TAPE (1) EW006992
VIDEO TAPES (1) EW007133
*VIOLATIONS (1) EW007493
VIRUSES (1) EW006853
*VOLATILE POLLUTANTS (1) EW007612
*WASTE DISPOSAL (47) EW006283 EW006284 EW006879 EW006895 EW006937 EW006960 EW007025
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*WASTE HANDLING (1) EW007377
*WASTE LOAD ALLOCATION (1) EW007067
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*WASTEWATER (9) EW006082 EW007190 EW007241 EW007415 EW007477 EW007514 EW007518
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WASTEWATER (2) EW007137 EW007750
*WASTEWATER ANALYSIS (4) EW006911 EW006912 EW007522 EW007628
*WASTEWATER COLLECTION (19) EW006935 EW006949 EW007133 EW007134 EW007188 EW007328 EW007340
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EW007519 EW007546 EW007633 EW007795

WASTEWATER COLLECTION (1) EW006185

*WASTEWATER CONCENTRATION (1) EW007741

*WASTEWATER DISPOSAL (1) EW007334

*WASTEWATER DISTRIBUTION (1) EW007797

*WASTEWATER TREATMENT (174) EW005077 EW006185 EW006284 EW006814 EW006852 EW006853 EW006876
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WASTEWATER TREATMENT (9) EW006935 EW007022 EW007139 EW007190 EW007436 EW007633 EW007680
EW007742 EW007752

WATER (1) EW006944

*WATER ANALYSIS (1) EW007603

WATER ANALYSIS (1) EW007750

*WATER CHEMISTRY (1) EW006948

*WATER COLLECTION (2) EW007507 EW007795

*WATER COLLECTION SYSTEMS (1) EW007530

*WATER CONSERVATION (6) EW006898 EW007418 EW007456 EW007504 EW007740 EW007743

WATER DEMAND (1) EW007492

*WATER DISTRIBUTION (12) EW006878 EW006900 EW006949 EW006950 EW007435 EW007438 EW007447
EW007489 EW007490 EW007571 EW007572 EW007647

WATER DISTRIBUTION (1) EW007442

*WATER FLOW (2) EW007441 EW007530

*WATER MAINS (1) EW007571

*WATER METERS (1) EW007445

*WATER PIPES (2) EW007441 EW007442

*WATER POLLUTION (12) EW006282 EW007048 EW007276 EW007303 EW007528 EW007538 EW007658

		EW007663 EW007752 EW007753 EW007753 EW007754
WATER POLLUTION	(1)	EW007613
*WATER POLLUTION CONTROL	(13)	EW001785 EW006957 EW007408 EW007411 EW007429 EW007518 EW007522 EW007581 EW007582 EW007591 EW007611 EW007620 EW007621
WATER POLLUTION CONTROL	(8)	EW005077 EW007198 EW007415 EW007418 EW007636 EW007645 EW007691 EW007782
*WATER PROJECTS	(1)	EW007350
*WATER QUALITY	(85)	EW096682 EW006685 EW006852 EW006876 EW006877 EW006897 EW006911 EW006912 EW006932 EW006956 EW006957 EW006961 EW007022 EW007024 EW007067 EW007138 EW007187 EW007188 EW007193 EW007198 EW007199 EW007242 EW007245 EW007275 EW007277 EW007338 EW007348 EW007366 EW007367 EW007387 EW007407 EW007408 EW007410 EW007415 EW007422 EW007426 EW007428 EW007471 EW007475 EW007476 EW007479 EW007493 EW007496 EW007498 EW007508 EW007514 EW007518 EW007522 EW007529 EW007534 EW007562 EW007573 EW007574 EW007575 EW007576 EW007577 EW007578 EW007580 EW007583 EW007591 EW007592 EW007595 EW007596 EW007597 EW007598 EW007602 EW007603 EW007604 EW007605 EW007606 EW007612 EW007613 EW007616 EW007617 EW007658 EW007663 EW007679 EW007680 EW007681 EW007686 EW007735 EW007744 EW007752 EW007753 EW007792
WATER QUALITY	(34)	EW006283 EW006878 EW006879 EW006899 EW006900 EW007080 EW007135 EW007190 EW007244 EW007263 EW007344 EW007345 EW007386 EW007388 EW007411 EW007425 EW007429 EW007447 EW007459 EW007480 EW007536 EW007589 EW007599 EW007600 EW007601 EW007614 EW007624 EW007628 EW007631 EW007733 EW007734 EW007738 EW007754 EW007793
WATER QUALITY MANAGEMENT	(1)	EW007647
*WATER RATES	(2)	EW007486 EW007487
*WATER RESOURCES	(40)	EW006853 EW006897 EW006898 EW006899 EW006913 EW006947 EW007028 EW007198 EW007304 EW007350 EW007397 EW007408 EW007418 EW007420 EW007422 EW007423 EW007427 EW007428 EW007475 EW007476 EW007486 EW007487 EW007492 EW007495 EW007504 EW007529 EW007530 EW007537 EW007540 EW007579 EW007606 EW007613 EW007641 EW007647 EW007679 EW007742 EW007743 EW007744 EW007750 EW007751
WATER RESOURCES	(10)	EW006900 EW007386 EW007415 EW007488 EW007658 EW007663 EW007745 EW007752 EW007753 EW007754
WATER RESOURCES EDUCATION	(1)	EW007753
*WATER REUSE	(8)	EW006853 EW006898 EW006961 EW007456 EW007492 EW007540 EW007742 EW007745
WATER RIGHTS	(1)	EW007418
*WATERSHEDS	(2)	EW006947 EW007423
WATERSHEDS	(1)	EW007192
*WATER SOFTENERS	(1)	EW006895
*WATER STORAGE	(2)	EW007505 EW007507
*WATER SUPPLY	(26)	EW005077 EW006682 EW006897 EW006898 EW006900 EW006939 EW006944

		EW007028 EW007188 EW007245 EW007432 EW007445 EW007447 EW007486 EW007487 EW007488 EW007489 EW007490 EW007492 EW007495 EW007496 EW007529 EW007537 EW007641 EW007744 EW007751
WATER SUPPLY	(3)	EW006899 EW007658 EW007663
*WATER SYSTEMS	(1)	EW007442
*WATER TREATMENT	(30)	EW006876 EW006932 EW006939 EW006944 EW007200 EW007212 EW007236 EW007245 EW007271 EW007272 EW007374 EW007415 EW007420 EW007429 EW007432 EW007437 EW007439 EW007440 EW007488 EW007489 EW007490 EW007491 EW007493 EW007497 EW007534 EW007589 EW007608 EW007647 EW007733 EW007753
WATER TREATMENT	(4)	EW006877 EW007496 EW007742 EW007751
*WATER USE	(6)	EW007028 EW007350 EW007504 EW007537 EW007740 EW007743
*WATERWAYS	(2)	EW007275 EW007679
*WATER WELLS	(1)	EW007530
*WEED CONTROL	(1)	EW007592
*WELLS	(3)	EW007199 EW007242 EW007530
WELLS	(1)	EW007479
*WETLANDS	(4)	EW006887 EW007330 EW007420 EW007427
WETLANDS	(3)	EW007275 EW007388 EW007540
*WILDLIFE	(1)	EW007427
*WINDROW COMPOSTING	(1)	EW007472
*WORD PROCESSING	(1)	EW007539
*WORK MEASUREMENT	(1)	EW007434
*WORKSHOPS	(3)	EW007328 EW007354 EW007738
*WORLD PROBLEMS	(1)	EW007522
*ZINC	(1)	EW007619
ZINC	(1)	EW007515
*208 PLANNING	(1)	EW007187